

# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138612111	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS, SIZE, 3/4 IN X 4 IN	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 100MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL- THREAD, UNC, SIZE, 3/4 IN X 4 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 100MM, THREADS 10 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:3/4 IN
LENGTH	:100MM
THREADS	:10 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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## PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900212546, 9900234464, 9903001281, 9900102633, 8138612111.

Prepared By  
PT. Sinergi Solusi Teknik

Verified By  
Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900239168	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 1-5/8 IN,	SHORT DESCRIPTION	STUDBOLT: 1-5/8-8UN X 275MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-5/8 IN, LENGTH 10-3/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 7 TPI, GRADE B7,C /W 2 HEAVY HEX NUTS ASTM A194 GR 2H, C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-5/8 IN, LENGTH 275MM, THREADS 8 UN, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-5/8 IN
LENGTH	:275MM
THREADS	:8 UN
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900239168, 9903003145.

Prepared By  
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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900212592	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	35 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B8M CL 2, UNC, >495MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 7/8 IN, LENGTH 4-1/2	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 115MM;B8M;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 7/8 IN, LENGTH 4-1/2 IN FULL THREAD, SPECIFICATION A193, GR B8M, MATERIAL STAINLESS STEEL 304, UNC, 10 TPI, GRAD E B8M, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 115MM, THREADS 9 UNC, MATERIAL STAINLESS STEEL 316, SPECIFICATION ASTM A193, GRADE B8M, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-8M

CHARACTERISTIC AND VALUE	
DIAMETER	:7/8 IN
LENGTH	:115MM
THREADS	:9 UNC
MATERIAL	:STAINLESS STEEL 316
SPECIFICATION	:ASTM A193
GRADE	:B8M
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-8M

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900212580	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN, LENGTH	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 210MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN, LENGTH 8-1/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, C/W 2 HE AVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 210MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/4 IN
LENGTH	:210MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900239153, 9903008857, 9900212580, 9900102623.

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138610111	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS, SIZE: 3/4 IN X 6 IN	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 150MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193-B6, ASTM A194-2H, ALL-THREAD, 10 UNC, SIZE: 3/4 IN X 6 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 150MM, THREADS 10 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	: 3/4 IN
LENGTH	: 150MM
THREADS	: 10 UNC
MATERIAL	: ALLOY STEEL
SPECIFICATION	: ASTM A193
GRADE	: B7
FINISH	: BLACK OXIDE
ADDITIONAL ITEMS	: C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 8138110011, 8138610111, 9900102610.

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611331	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD: BOLT,CS, SIZE: 3/4 IN X 7-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 190MM;B7;BLK;NUT
LONG DESCRIPTION	STUD: BOLT, CARBON STEEL, UNC, BOLT: ASTM A193, GR.B7, CLASS 2A, NUT: ASTM A194 GR.2H, CLASS 2B, SIZE: 3/4 IN X 7-1/2 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 190MM, THREADS 10 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	: 3/4 IN
LENGTH	: 190MM
THREADS	: 10 UNC
MATERIAL	: ALLOY STEEL
SPECIFICATION	: ASTM A193
GRADE	: B7
FINISH	: BLACK OXIDE
ADDITIONAL ITEMS	: C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 8138611331, 9900216495.

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234465	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIA 3/4 IN, 5 IN FULL THREAD	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X125MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 3/4 IN, LENGTH 5 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, DELIVERY COMPL ETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H AND MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 125MM, THREADS 10 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	: 3/4 IN
LENGTH	: 125MM
THREADS	: 10 UNC
MATERIAL	: ALLOY STEEL
SPECIFICATION	: ASTM A193
GRADE	: B7
FINISH	: BLACK OXIDE
ADDITIONAL ITEMS	: C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 8138610761, 9903003146, 9900234465.

Prepared By  
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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611301	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT-NUT, 7/8", 6", UNC, A193-B7, 2H	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 150MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT, ALL-THREAD, 7/8", 6", 9 UNC, CS, ASTM A193 - B7, ASTM A194 - 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 150MM, THREADS 9 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:7/8 IN
LENGTH	:150MM
THREADS	:9 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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**PHYSICAL INSPECTION RESULT:**

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900102649, 8138611301, 9900102608, 9900234453, 9900103995, 8138612171.

Prepared By  
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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903049571	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	BOLT: STUD, M39 X 200 MM, A193 GR B7	SHORT DESCRIPTION	STUDBOLT: M39-4.00 X 200MM;B7;BLK;NUT
LONG DESCRIPTION	BOLT: STUD, FOR TOP COVER MAIN STOP VALVE, FULL THREAD, SIZE M39 LENGTH 200 MM, MATERIAL A193 GR B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER M39, LENGTH 200MM, THREADS 4MM, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:M39
LENGTH	:200MM
THREADS	:4MM
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903074766	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: UNC 1-3/4 IN,	SHORT DESCRIPTION	STUDBOLT: 1-3/4-5UNC X 400MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1-3/4 IN, LENGTH 400MM, FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-3/4 IN, LENGTH 400MM, THREADS 5 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-3/4 IN
LENGTH	:400MM
THREADS	:5 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102730	MATERIAL NUMBER	
NOUN	-	NOUN	BOLT
MODIFIER	-	MODIFIER	MACHINE
MAIN CHARACTERISTIC		MESC GROUP	00 - temporary
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	00 - temporary
BASE UOM	EA	MESC SUB SUB GROUP	00 - temporary
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: UNC 3/4 IN,	SHORT DESCRIPTION	BOLT: 3/4INX10UNCX150MM;HEX; GR 8.8;GALV
LONG DESCRIPTION	STUD BOLT: UNC 3/4 IN, LENGTH 162MM, FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 H EAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	BOLT: MACHINE, DIAMETER 3/4 IN, LENGTH 150MM, THREADS 10 UNC, HEAD HEXAGON, MATERIAL CARBON STEEL, SPECIFICATION ISO 898-1, GRADE 8.8, FINISH GALVANIZED, ADDITIONAL ITEMS C/W 1 HEX NUT

CHARACTERISTIC AND VALUE	
DIAMETER	:3/4 IN
LENGTH	:150MM
THREADS	:10 UNC
HEAD	:HEXAGON
MATERIAL	:CARBON STEEL
SPECIFICATION	:ISO 898-1
GRADE	:8.8
FINISH	:GALVANIZED
ADDITIONAL ITEMS	:C/W 1 HEX NUT

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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234484	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/Ni, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 5/8 IN, LENGTH 3 IN	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X 75MM;B7M;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 5/8 IN, LENGTH 3 IN FULL THREAD, SPECIFICATION A193, GR B7M, MATERIAL CARBON STEEL,UNC, GRADE B7M, C/W 2 HEAVY H EX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 5/8 IN, LENGTH 75MM, THREADS 11 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7M, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2HM

CHARACTERISTIC AND VALUE	
DIAMETER	:5/8 IN
LENGTH	:75MM
THREADS	:11 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7M
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2HM

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234461	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/Ni, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 3/4 IN, LENGTH 11 IN	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 280MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 3/4 IN, LENGTH 11 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H AND C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 280MM, THREADS 10 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	: 3/4 IN
LENGTH	: 280MM
THREADS	: 10 UNC
MATERIAL	: ALLOY STEEL
SPECIFICATION	: ASTM A193
GRADE	: B7
FINISH	: BLACK OXIDE
ADDITIONAL ITEMS	: C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900218722, 9900234461.

Prepared By  
PT. Sinergi Solusi Teknik

Verified By  
Star Energy Geothermal

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(.....)

# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138610521	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS, SIZE: 1-1/2 IN X 8-1/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/2-6UNC X 210MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 H, ALL-THREAD, 6 UNC, SIZE: 1-1/2 IN X 8-1/4 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/2 IN, LENGTH 210MM, THREADS 6 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/2 IN
LENGTH	:210MM
THREADS	:6 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 8138610521, 9900245710.

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234440	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIA 1-3/8 IN, LENGTH 10-1/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-3/8-6UNC X 260MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-3/8 IN, LENGTH 10-1/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, C/W 2 H EAVY HEX NUTS ASTM A194 GR 2H AND C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-3/8 IN, LENGTH 260MM, THREADS 6 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-3/8 IN
LENGTH	:260MM
THREADS	:6 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 8138612041, 9900234440, 8138980651.

Prepared By  
PT. Sinergi Solusi Teknik

Verified By  
Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611351	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS, SIZE, 5/8 IN X 3-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X 90MM;B7;FKM;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: ALL-THREAD, 5/8 IN X 3-1/2 IN, UNC, CS, ASTM A193 GR B7 BOLT, ASTM A194 GR 2H NUT, FLUORO CARBON COATED	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 5/8 IN, LENGTH 90MM, THREADS 11 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH FLUOROCARBON COATED, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:5/8 IN
LENGTH	:90MM
THREADS	:11 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:FLUOROCARBON COATED
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 8138611351, 8138610081.

Prepared By  
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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138612221	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT AND NUT: 5/8 IN, 3-1/4 IN	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X 85MM;B7;FKM;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: ALL-THREAD, 5/8 IN, 3-1/4 IN, UNC, CS, ASTM A193 - B7, ASTM A194 - 2H, FLUORO CARBON COATED	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 5/8 IN, LENGTH 85MM, THREADS 11 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH FLUOROCARBON COATED, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:5/8 IN
LENGTH	:85MM
THREADS	:11 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:FLUOROCARBON COATED
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 8138612221, 8138611361.

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PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900236571	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIA 1-1/8 IN, LENGTH 10 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 255MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/8 IN, LENGTH 10 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 7 TPI, GRADE B7,CADMI UM PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, PITCH DIA. 0.0030 IN TO 0.0040 IN (H8), C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/8 IN, LENGTH 255MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/8 IN
LENGTH	:255MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900239159, 9900236571.

Prepared By  
PT. Sinergi Solusi Teknik

Verified By  
Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611871	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD,BOLT: CS,SIZE: 1-1/2 IN X 14-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/2-6UNC X 370MM;B7;BLK;NUT
LONG DESCRIPTION	STUD: BOLT, CARBON STEEL AND NUT, ALL-THREAD, 6 UNC, ASTM A193 - B7, ASTM A194 - 2H, SIZE: 1-1/2 IN X 14-1/2 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/2 IN, LENGTH 370MM, THREADS 6 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/2 IN
LENGTH	:370MM
THREADS	:6 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900103996	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: UNC 1-1/4 IN,	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 370MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1-1/4 IN, LENGTH 370mm FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 370MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/4 IN
LENGTH	:370MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102623	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/Ni, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: UNC 1-1/4 IN,	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 210MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1-1/4 IN, LENGTH 210 MM, FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 210MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/4 IN
LENGTH	:210MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900239153, 9903008857, 9900212580, 9900102623.

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234420	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIA 1-1/2 IN, 10-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/2-6UNC X 265MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/2 IN, LENGTH 10-1/2 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, C/W 2 H EAVY HEX NUTS ASTM A194 GR 2H AND C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/2 IN, LENGTH 265MM, THREADS 6 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/2 IN
LENGTH	:265MM
THREADS	:6 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

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Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611831	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS, SIZE: 7/8 IN X 10-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 275MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, 9 UNC, SIZE: 7/8 IN X 10-3/4 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 275MM, THREADS 9 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:7/8 IN
LENGTH	:275MM
THREADS	:9 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

Verified By  
Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102622	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: UNC 1-1/4 IN,	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 185MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1-1/4 IN, LENGTH 187MM, FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 185MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/4 IN
LENGTH	:185MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 8138610161, 9900102622, 9900212577.

Prepared By  
PT. Sinergi Solusi Teknik

Verified By  
Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900236563	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIA 7/8 IN, LENGTH 2-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 65MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 7/8 IN, LENGTH 2-1/2 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 9 TPI, GRADE B7,CADM IUM PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, PITCH DIA. 0.0020 IN TO 0.0030 IN (H6), C/W MILL CERTIFICATES	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 65MM, THREADS 9 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:7/8 IN
LENGTH	:65MM
THREADS	:9 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

Verified By  
Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611161	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/Ni, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS,SIZE 1-5/8 IN X 11-1/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-5/8-8UN X 285MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL- THREAD, UNC, SIZE 1-5/8 IN X 11-1/4 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-5/8 IN, LENGTH 285MM, THREADS 8 UN, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-5/8 IN
LENGTH	:285MM
THREADS	:8 UN
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 8138611161, 9900239169.

Prepared By  
PT. Sinergi Solusi Teknik

Verified By  
Star Energy Geothermal

(.....)

(.....)

# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102610	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: UNC 3/4 IN, LENGTH 150MM	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 150MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 3/4 IN, LENGTH 150MM, FULL THREAD, SPECIFICATION A193, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 HEAVY HE X NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 150MM, THREADS 10 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	: 3/4 IN
LENGTH	: 150MM
THREADS	: 10 UNC
MATERIAL	: ALLOY STEEL
SPECIFICATION	: ASTM A193
GRADE	: B7
FINISH	: BLACK OXIDE
ADDITIONAL ITEMS	: C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 8138110011, 8138610111, 9900102610.

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138610261	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD: BOLT,CROME,SIZE: 1-1/4 INX8-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 215MM;B7;CP;NUT
LONG DESCRIPTION	STUD: BOLT, CROME, ALL-THREAD, 7 UNC, ASTM A193 - B7, ASTM A194 - 2H, SIZE: 1-1/4 IN X 8-1/2 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 215MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CHROME PLATED, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/4 IN
LENGTH	:215MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CHROME PLATED
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9913056922	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K74 - Tubulars Goods	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	BOLT: STUD, DIAMETER 2 IN, LENGTH 355 MM	SHORT DESCRIPTION	STUDBOLT: 2IN-4.5UNC X 355MM;B7;BLK;NUT
LONG DESCRIPTION	BOLT: STUD, DIAMETER 2 IN, LENGTH 355 MM FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7,C/W 2 HEAVY HE X NUTS ASTM A194 GR 2H AND C/W MILL CERTIFICATE, MANUFACTURER DAN LOC, HIGHLAND THREADS OR EQUAL	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 2 IN, LENGTH 355MM, THREADS 4.5 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:2 IN
LENGTH	:355MM
THREADS	:4.5 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

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Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	6232010011	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K62 - Machine Tools	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS, SIZE: 1/2 IN X 1 IN LG	SHORT DESCRIPTION	STUDBOLT: 1/2-13UNC X 25MM;B7;BLK
LONG DESCRIPTION	STUD BOLT: CARBON STEEL, ALL-THREAD, SIZE: 1/2 IN, 1 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1/2 IN, LENGTH 25MM, THREADS 13 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE

CHARACTERISTIC AND VALUE	
DIAMETER	:1/2 IN
LENGTH	:25MM
THREADS	:13 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611071	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CROME, SIZE: 1-3/4 IN X 12 IN	SHORT DESCRIPTION	STUDBOLT: 1-3/4-5UNC X 305MM;B7;CP;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CROME, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, UNC, SIZE: 1-3/4 IN X 12 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-3/4 IN, LENGTH 305MM, THREADS 5 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CHROME PLATED, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-3/4 IN
LENGTH	:305MM
THREADS	:5 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CHROME PLATED
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234466	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/Ni, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIA 3/4 IN, LENGTH 5-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 140MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 3/4 IN, LENGTH 5-1/2 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL,UNC, GRADE B7, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 140MM, THREADS 10 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	: 3/4 IN
LENGTH	: 140MM
THREADS	: 10 UNC
MATERIAL	: ALLOY STEEL
SPECIFICATION	: ASTM A193
GRADE	: B7
FINISH	: BLACK OXIDE
ADDITIONAL ITEMS	: C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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## PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900234466, 9903000299, 9900212547, 8138110021, 9900102636.

Prepared By  
PT. Sinergi Solusi Teknik

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Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900255279	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 1 IN,	SHORT DESCRIPTION	STUDBOLT: 1-8UNC X 265MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1 IN, LENGTH 10-1/2 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL,UNC, GRADE B7, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1 IN, LENGTH 265MM, THREADS 8 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1 IN
LENGTH	:265MM
THREADS	:8 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900255279, 8138611771.

Prepared By  
PT. Sinergi Solusi Teknik

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Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900239160	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 1-1/8 IN,	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 305MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/8 IN, LENGTH 12 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 7 TPI, GRADE B7, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/8 IN, LENGTH 305MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/8 IN
LENGTH	:305MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900239163	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	BOLT: STUD, DIA 1-1/8 IN, LE 6-1/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 160MM;B7;BLK;NUT
LONG DESCRIPTION	BOLT: STUD, DIAMETER 1-1/8 IN, LENGTH 6-1/4 IN FULL THREAD, SPECIFICATION A193, MATERIAL CARBON STEEL, UNC, 7 TPI, GRADE B7, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/8 IN, LENGTH 160MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/8 IN
LENGTH	:160MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903003145	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: 1-5/8 IN X 10-3/4 IN, A193 B7	SHORT DESCRIPTION	STUDBOLT: 1-5/8-8UN X 275MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-5/8 IN, LENGTH 10-3/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7,C/W 2 HE AVY HEX NUTS ASTM A194 GR 2H, C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-5/8 IN, LENGTH 275MM, THREADS 8 UN, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-5/8 IN
LENGTH	:275MM
THREADS	:8 UN
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900239168, 9903003145.

Prepared By  
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Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903037090	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K62 - Machine Tools	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	BOLT: STUD DIAMETER 1-5/8 IN	SHORT DESCRIPTION	STUDBOLT: 1-5/8-8UN X 345MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-5/8 IN, LENGTH 13-5/8 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, C/W 2 H EAVY HEX NUTS ASTM A194 GR 2H AND C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-5/8 IN, LENGTH 345MM, THREADS 8 UN, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-5/8 IN
LENGTH	:345MM
THREADS	:8 UN
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

Verified By  
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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900236573	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIA 1-1/8 IN, LENGTH 10-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 275MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/8 IN, LENGTH 10-3/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 7 TPI, GRADE B7,C ADMIUM PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, PITCH DIA. 0.0030 IN TO 0.0040 IN (H8), C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/8 IN, LENGTH 275MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/8 IN
LENGTH	:275MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

Verified By  
Star Energy Geothermal

(.....)

(.....)

# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102704	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: UNC 1-1/4 IN,	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 375MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1-1/4 IN, LENGTH 375MM, FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 375MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/4 IN
LENGTH	:375MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

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Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102729	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: UNC 3/4 IN, 111 MM FULL THRD	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 110MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 3/4 IN, LENGTH 111MM, FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 H EAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 110MM, THREADS 10 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	: 3/4 IN
LENGTH	: 110MM
THREADS	: 10 UNC
MATERIAL	: ALLOY STEEL
SPECIFICATION	: ASTM A193
GRADE	: B7
FINISH	: BLACK OXIDE
ADDITIONAL ITEMS	: C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9903001287, 9913055958, 9900102729.

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900242601	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	BOLT: STUD, 5/8 X 4 IN	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X 100MM;B7;CD;NUT
LONG DESCRIPTION	BOLT: STUD, 5/8 X 4 IN, ASTM A-193, GR FULL THREAD B7, COMPLETE WITH HEX NUTS ASTM A-194 GR 2 H, CADMIUM PLATED	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 5/8 IN, LENGTH 100MM, THREADS 11 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:5/8 IN
LENGTH	:100MM
THREADS	:11 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900212531, 9900234718, 9900242601.

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9913056160	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	BOLT: STUD,1-3/8 UNCX 1000 MM,A193 GR B7	SHORT DESCRIPTION	STUDBOLT: 1-3/8-6UNC X 1000MM;B7;BLK;NUT
LONG DESCRIPTION	BOLT: STUD, FULL THREAD, SIZE 1-3/8 IN UNC LENGTH 1000 MM, MATERIAL A193 GR B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-3/8 IN, LENGTH 1000MM, THREADS 6 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-3/8 IN
LENGTH	:1000MM
THREADS	:6 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102633	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/Ni, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: UNC 3/4 IN, 102MM FULL THREAD	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 100MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 3/4 IN, LENGTH 102 MM, FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 100MM, THREADS 10 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	: 3/4 IN
LENGTH	: 100MM
THREADS	: 10 UNC
MATERIAL	: ALLOY STEEL
SPECIFICATION	: ASTM A193
GRADE	: B7
FINISH	: BLACK OXIDE
ADDITIONAL ITEMS	: C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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## PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900212546, 9900234464, 9903001281, 9900102633, 8138612111.

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900244901	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN,	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 230MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN, LENGTH 9 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, CADMIUM PLAT ED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 230MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/4 IN
LENGTH	:230MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900244901, 9900212582.

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900244916	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	BOLT: STUD, DIA 1-5/8 IN, LE 11-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-5/8-8UN X 300MM;B7M;ZP;NUT
LONG DESCRIPTION	BOLT: STUD, DIAMETER 1-5/8 IN, LENGTH 11-3/4 IN FULL THREAD, SPECIFICATION A193, MATERIAL ZINC PLATED, GRADE B7M, 8 UN, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2HM	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-5/8 IN, LENGTH 300MM, THREADS 8 UN, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7M, FINISH ZINC PLATED, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2HM

CHARACTERISTIC AND VALUE	
DIAMETER	:1-5/8 IN
LENGTH	:300MM
THREADS	:8 UN
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7M
FINISH	:ZINC PLATED
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2HM

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903008848	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	PC	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/Ni, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: 3/4 IN X 3-3/4, A19 GR.B7	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 95MM;B8;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 3/4 IN, LENGTH 3-3/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL STAINLESS STEEL 304, UNC, GRADE B7, C/W 2 HEAVY HEX NUTS SS 304 ASTM A194 GR 2H, [PMI (POSITIVE MATERIAL IDENTIFICATION) WILL BE CONDUCTED BY STAR ENERGY WAREHOUSE]	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 95MM, THREADS 10 UNC, MATERIAL STAINLESS STEEL 304, SPECIFICATION ASTM A193, GRADE B8, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-8

CHARACTERISTIC AND VALUE	
DIAMETER	:3/4 IN
LENGTH	:95MM
THREADS	:10 UNC
MATERIAL	:STAINLESS STEEL 304
SPECIFICATION	:ASTM A193
GRADE	:B8
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-8

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903001278	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 1-1/4IN X 9-7/8IN	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 250MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN, LENGTH 9-7/8 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7,C/W2 HEAV Y HEX NUTS ASTM A194 GR 2H, C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 250MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/4 IN
LENGTH	:250MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 8138610331, 9903014967, 9903001278.

Prepared By  
PT. Sinergi Solusi Teknik

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Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900103995	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: UNC 7/8 IN,	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 150MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 7/8 IN, LENGTH 150MM, FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, C/W 2 HEAVY HEX N UTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 150MM, THREADS 9 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:7/8 IN
LENGTH	:150MM
THREADS	:9 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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## PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900102649, 8138611301, 9900102608, 9900234453, 9900103995, 8138612171.

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234419	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIA 1-1/2 IN, LENGTH 10-1/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/2-6UNC X 260MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/2 IN, LENGTH 10-1/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 6 TPI, GRADE B7, CADMIUM PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, PITCH DIA. 0.0030 IN TO 0.0040 IN (H8), C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/2 IN, LENGTH 260MM, THREADS 6 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/2 IN
LENGTH	:260MM
THREADS	:6 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900247225, 9900234419.

Prepared By  
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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138612231	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	35 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B8M CL 2, UNC, >495MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: SS, SIZE: 7/8 IN X 3-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 95MM;B8M;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: STAINLESS STEEL, 316, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, UNC, SIZE: 7/8 IN X 3-3/4 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 95MM, THREADS 9 UNC, MATERIAL STAINLESS STEEL 316, SPECIFICATION ASTM A193, GRADE B8M, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-8M

CHARACTERISTIC AND VALUE	
DIAMETER	:7/8 IN
LENGTH	:95MM
THREADS	:9 UNC
MATERIAL	:STAINLESS STEEL 316
SPECIFICATION	:ASTM A193
GRADE	:B8M
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-8M

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234438	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIA 1-3/8 IN, LENGTH 9-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-3/8-6UNC X 245MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-3/8 IN, LENGTH 9-3/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, C/W 2 HE AVY HEX NUTS ASTM A194 GR 2H AND C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-3/8 IN, LENGTH 245MM, THREADS 6 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-3/8 IN
LENGTH	:245MM
THREADS	:6 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

Verified By  
Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900212582	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN,LENGTH 9 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 230MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN, LENGTH 9 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 7 TPI, GRADE B7,CADMIU M OR ZINC PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, PITCH DIA. 0.0030 IN TO 0.0040 IN (H8), C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 230MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/4 IN
LENGTH	:230MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900244901, 9900212582.

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102686	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: UNC 1-1/4 IN,	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 140MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1-1/4 IN, LENGTH 140MM, FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 140MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/4 IN
LENGTH	:140MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900104671	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K62 - Machine Tools	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	35 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B8M CL 2, UNC, >495MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	BOLT: STUD DIAMETER 3/4 IN, LENGTH 8 IN	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 200MM;B8M;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 3/4 IN, LENGTH 8 IN FULL THREAD, SPECIFICATION A193, GR B8M, MATERIAL STAINLESS STEEL, UNC, GRADE B8M, C/W 2 HEA VY HEX NUTS ASTM A194 GR 2H AND C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 200MM, THREADS 10 UNC, MATERIAL STAINLESS STEEL 316, SPECIFICATION ASTM A193, GRADE B8M, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-8M

CHARACTERISTIC AND VALUE	
DIAMETER	: 3/4 IN
LENGTH	: 200MM
THREADS	: 10 UNC
MATERIAL	: STAINLESS STEEL 316
SPECIFICATION	: ASTM A193
GRADE	: B8M
ADDITIONAL ITEMS	: C/W 2 HEX NUT ASTM A194-8M

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9913056155	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	BOLT: STUD, 5/8 UNC X 1000 MM, A193 GR B7	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X 1000MM;B7;BLK;NUT
LONG DESCRIPTION	BOLT: STUD, FULL THREAD, SIZE 5/8 IN UNC LENGTH 1000 MM, MATERIAL A193 GR B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 5/8 IN, LENGTH 1000MM, THREADS 11 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	: 5/8 IN
LENGTH	: 1000MM
THREADS	: 11 UNC
MATERIAL	: ALLOY STEEL
SPECIFICATION	: ASTM A193
GRADE	: B7
FINISH	: BLACK OXIDE
ADDITIONAL ITEMS	: C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900239167	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K62 - Machine Tools	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/Ni, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 1-3/4 IN,	SHORT DESCRIPTION	STUDBOLT: 1-3/4-5UNC X 305MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-3/4 IN, LENGTH 12 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 7 TPI, GRADE B7,CADMI UM PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-3/4 IN, LENGTH 305MM, THREADS 5 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-3/4 IN
LENGTH	:305MM
THREADS	:5 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900239134	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 3/4 IN,	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 95MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 3/4 IN, LENGTH 3-3/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 7 TPI, GRADE B7,CADM IUM PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 95MM, THREADS 10 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:3/4 IN
LENGTH	:95MM
THREADS	:10 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900212535, 9900239134.

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611431	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS, SIZE: 7/8 IN X 10-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 265MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, UNC, SIZE: 7/8 IN X 10-1/2 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 265MM, THREADS 9 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:7/8 IN
LENGTH	:265MM
THREADS	:9 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 8138611431, 8138980111.

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138610191	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	14 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B8, METRIC
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: SS304, SIZE: 19MM X 240MM	SHORT DESCRIPTION	STUDBOLT: M19-2.50 X 240MM;B8
LONG DESCRIPTION	STUD BOLT: SS304, SIZE: 19MM X 240MM, FOR COOLING FAN BLADE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER M19, LENGTH 240MM, THREADS 2.5MM, MATERIAL STAINLESS STEEL 304, SPECIFICATION ASTM A193, GRADE B8

CHARACTERISTIC AND VALUE	
DIAMETER	:M19
LENGTH	:240MM
THREADS	:2.5MM
MATERIAL	:STAINLESS STEEL 304
SPECIFICATION	:ASTM A193
GRADE	:B8

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102715	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K62 - Machine Tools	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	BOLT: STUD DIAMETER 1-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/2-6UNC X 235MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/2 IN, LENGTH 9-1/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, C/W 2 HE AVY HEX NUTS ASTM A194 GR 2H AND C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/2 IN, LENGTH 235MM, THREADS 6 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/2 IN
LENGTH	:235MM
THREADS	:6 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900221483, 9900102715, 8138611081.

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PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138110151	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	SET	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS, SIZE:1-5/8 IN X 11-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-5/8-8UN X 290MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193-B6, ASTM A194-2H, ALL-THREAD, UNC, SIZE: 1-5/8 IN X 11-1/2 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-5/8 IN, LENGTH 290MM, THREADS 8 UN, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-5/8 IN
LENGTH	:290MM
THREADS	:8 UN
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102634	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: UNC 3/4 IN, 114 MM FULL THRD	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 115MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 3/4 IN, LENGTH 114 MM, FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 115MM, THREADS 10 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	: 3/4 IN
LENGTH	: 115MM
THREADS	: 10 UNC
MATERIAL	: ALLOY STEEL
SPECIFICATION	: ASTM A193
GRADE	: B7
FINISH	: BLACK OXIDE
ADDITIONAL ITEMS	: C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 8138611251, 9900102634.

Prepared By  
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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138612171	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/Ni, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT AND NUT: CS, 7/8 IN X 6 IN	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 150MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: ALL-THREAD, CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, UNC, SIZE, 7/8 IN X 6 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 150MM, THREADS 9 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:7/8 IN
LENGTH	:150MM
THREADS	:9 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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## PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900102649, 8138611301, 9900102608, 9900234453, 9900103995, 8138612171.

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900245835	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	BOLT: STUD, 2-1/4 X 16-3/4 IN,	SHORT DESCRIPTION	STUDBOLT: 2-1/4-8UN X 425MM;B7;CD
LONG DESCRIPTION	BOLT: STUD, 2-1/4 X 16-3/4 IN, FULL THREAD MATERIAL : ALLOY STEEL ASTM-A193 GR. B7;THREAD TYPE : UNC; TPI : 8;FINISH : CADMIUM PLATE D ASTM-B696;	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 2-1/4 IN, LENGTH 425MM, THREADS 8 UN, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696

CHARACTERISTIC AND VALUE	
DIAMETER	:2-1/4 IN
LENGTH	:425MM
THREADS	:8 UN
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

Verified By  
Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102638	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: UNC 3/4 IN, 165 MM FULL THRE	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 165MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 3/4 IN, LENGTH 165 MM, FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 165MM, THREADS 10 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	: 3/4 IN
LENGTH	: 165MM
THREADS	: 10 UNC
MATERIAL	: ALLOY STEEL
SPECIFICATION	: ASTM A193
GRADE	: B7
FINISH	: BLACK OXIDE
ADDITIONAL ITEMS	: C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900234469, 8138980801, 9900102638.

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900253008	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: UNC 7/8 IN,	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 160MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 7/8 IN, LENGTH 159MM, FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 H EAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 160MM, THREADS 9 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:7/8 IN
LENGTH	:160MM
THREADS	:9 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900253008, 9900102650, 8138980511, 9900234454.

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9913056924	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K74 - Tubulars Goods	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/Ni, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 3/4 IN, A193, GR B7	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 115MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 3/4 IN, LENGTH 4-1/2 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, CADMIUM PLATED, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H AND C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 115MM, THREADS 10 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:3/4 IN
LENGTH	:115MM
THREADS	:10 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9913056924, 9900239135.

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9913057362	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: UNC 1/2 IN, LENGTH 70 MM, FUL	SHORT DESCRIPTION	STUDBOLT: 1/2-13UNC X 70MM;B8M;NUT
LONG DESCRIPTION	STUD BOLT: ALL-THREAD, 1/2 IN, 70 MM, UNC FULL THREAD, TP 316L, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H, GRADE B7, MATERIAL S DTA UNIT III	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1/2 IN, LENGTH 70MM, THREADS 13 UNC, MATERIAL STAINLESS STEEL 316L, SPECIFICATION ASTM A193, GRADE B8M, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-8M

CHARACTERISTIC AND VALUE	
DIAMETER	:1/2 IN
LENGTH	:70MM
THREADS	:13 UNC
MATERIAL	:STAINLESS STEEL 316L
SPECIFICATION	:ASTM A193
GRADE	:B8M
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-8M

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102697	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: UNC 1-1/4 IN,	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 180MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1-1/4 IN, LENGTH 178 MM, FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 180MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/4 IN
LENGTH	:180MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9903003150, 9900102697.

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234436	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIA 1-1/4 IN, LENGTH 20-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 520MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN, LENGTH 20-1/2 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, C/W 2 H EAVY HEX NUTS ASTM A194 GR 2H AND C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 520MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/4 IN
LENGTH	:520MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138980301	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS, SIZE: 1/4 IN X 8 X 180	SHORT DESCRIPTION	STUDBOLT: 1/4-20UNC X 180MM;B7;FKM;NUT
LONG DESCRIPTION	STUD BOLT: CARBON STEEL, C/W WASHER, SIZE: 1/4 IN X 8 X 180	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1/4 IN, LENGTH 180MM, THREADS 20 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH FLUOROCARBON COATED, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H, C/W 2 FLAT WASHER ASTM F436

CHARACTERISTIC AND VALUE	
DIAMETER	:1/4 IN
LENGTH	:180MM
THREADS	:20 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:FLUOROCARBON COATED
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H
ADDITIONAL ITEMS	:C/W 2 FLAT WASHER ASTM F436

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611241	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD: BOLT,CS, SIZE: 5/8 IN X 1-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X 40MM;B7;BLK;NUT
LONG DESCRIPTION	STUD: BOLT, CARBON STEEL, AND NUT, ALL-THREAD, 11 UNC, SIZE: 5/8 IN X 1-1/2 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 5/8 IN, LENGTH 40MM, THREADS 11 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:5/8 IN
LENGTH	:40MM
THREADS	:11 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900105001	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: UNC 1-3/4 IN,	SHORT DESCRIPTION	STUDBOLT: 1-3/4-5UNC X 550MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1-3/4 IN, LENGTH 547MM, FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-3/4 IN, LENGTH 550MM, THREADS 5 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-3/4 IN
LENGTH	:550MM
THREADS	:5 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138610301	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT & NUT: ALL-THREAD, 1-1/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 230MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: ALL-THREAD, 1-1/4 IN, 9 IN, 7 UNC, CS, ASTM A193 - B7, ASTM A194 - 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 230MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/4 IN
LENGTH	:230MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9903003144, 8138610301, 8138611991, 9900105720.

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611391	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD: BOLT-NUT 5/8 IN, 3-3/4 IN, UNC, B7	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X 95MM;B7;FKM;NUT
LONG DESCRIPTION	STUD: BOLT AND NUT ALL-THREAD, 5/8 IN, 3-3/4 IN, UNC, CS, ASTM A193 - B7, ASTM A194 - 2H, FLUORO CARBON COATED	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 5/8 IN, LENGTH 95MM, THREADS 11 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH FLUOROCARBON COATED, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:5/8 IN
LENGTH	:95MM
THREADS	:11 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:FLUOROCARBON COATED
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903003146	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: 3/4 IN X 5 IN, A193 GR.B7	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X125MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 3/4 IN, LENGTH 5 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7,C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 125MM, THREADS 10 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	: 3/4 IN
LENGTH	: 125MM
THREADS	: 10 UNC
MATERIAL	: ALLOY STEEL
SPECIFICATION	: ASTM A193
GRADE	: B7
FINISH	: BLACK OXIDE
ADDITIONAL ITEMS	: C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 8138610761, 9903003146, 9900234465.

Prepared By  
PT. Sinergi Solusi Teknik

Verified By  
Star Energy Geothermal

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(.....)

# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900212530	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: 5/8 X 3-1/2 IN, FULL THREAD	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X 90MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: 5/8 X 3-1/2 IN, FULL THREAD, MATERIAL ALLOY STEEL ASTM-A193 GR. B7, THREAD TYPE UNC, TPI : 11, FINISH: CADMIUM PLATED AST M-B696, ADP, COMPLETE WITH 2 EA HEX. NUTS ASTM-A194 GR. 2H, COMPLETE WITH MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 5/8 IN, LENGTH 90MM, THREADS 11 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:5/8 IN
LENGTH	:90MM
THREADS	:11 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

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Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611891	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS, SIZE: 1-3/4 IN X 9-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-3/4-5UNC X 240MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, UNC, SIZE: 1-3/4 IN X 9-1/2 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-3/4 IN, LENGTH 240MM, THREADS 5 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-3/4 IN
LENGTH	:240MM
THREADS	:5 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138610211	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT-NUT, 3/4 IN X 10 IN	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 255MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: ALL-THREAD, 3/4 IN X 10 IN UNC, CS, ASTM A194 - B7, ASTM A194 - 2H, C/W 2 (TWO) HEAVY HEX NUTS A194-2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 255MM, THREADS 10 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	: 3/4 IN
LENGTH	: 255MM
THREADS	: 10 UNC
MATERIAL	: ALLOY STEEL
SPECIFICATION	: ASTM A193
GRADE	: B7
FINISH	: BLACK OXIDE
ADDITIONAL ITEMS	: C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234444	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 1 IN, LENGTH 5-1/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-8UNC X 135MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1 IN, LENGTH 5-1/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H AND C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1 IN, LENGTH 135MM, THREADS 8 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1 IN
LENGTH	:135MM
THREADS	:8 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900239170, 9900234444.

Prepared By  
PT. Sinergi Solusi Teknik

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Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900212551	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/Ni, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 3/4 IN, LENGTH 8 IN	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 190MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 3/4 IN, LENGTH 8 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 10 TPI, GRADE B7,CADMIUM OR ZINC PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, PITCH DIA. 0.0020 IN TO 0.0025 IN (H5), C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 190MM, THREADS 10 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:3/4 IN
LENGTH	:190MM
THREADS	:10 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102608	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K62 - Machine Tools	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/Ni, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: UNC 7/8 IN, 150MM FULL THREAD	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 150MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 7/8 IN, LENGTH 150MM, FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 H EAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 150MM, THREADS 9 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:7/8 IN
LENGTH	:150MM
THREADS	:9 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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## PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900102649, 8138611301, 9900102608, 9900234453, 9900103995, 8138612171.

Prepared By  
PT. Sinergi Solusi Teknik

Verified By  
Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900212555	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 7/8 IN, LENG 4-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 120MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 7/8 IN, LENGTH 4-3/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 9 TPI, GRADE B7, CAD MIUM PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, PITCH DIA. 0.0025 IN TO 0.0030 IN (H6), C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 120MM, THREADS 9 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:7/8 IN
LENGTH	:120MM
THREADS	:9 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

Verified By  
Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138980801	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD: BOLT,CS NUT, SIZE: 3/4 IN X 165	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 165MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: CARBON STEEL AND NUT, A193GR.B7/A, SIZE: 3/4 IN X 165	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 165MM, THREADS 10 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	: 3/4 IN
LENGTH	: 165MM
THREADS	: 10 UNC
MATERIAL	: ALLOY STEEL
SPECIFICATION	: ASTM A193
GRADE	: B7
FINISH	: BLACK OXIDE
ADDITIONAL ITEMS	: C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900234469, 8138980801, 9900102638.

Prepared By  
PT. Sinergi Solusi Teknik

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Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900239152	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN,	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 215MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN, LENGTH 8-1/2 IN FULL THREAD, SPECIFICATION A193, GRADE B7, MATERIAL CARBON STEEL, UNC, GRADE ADE B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GRADE 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 215MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/4 IN
LENGTH	:215MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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## PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9903003148, 9900234432, 8138610061, 8138611971, 9900239152, 9900104662.

Prepared By  
PT. Sinergi Solusi Teknik

Verified By  
Star Energy Geothermal

(.....)

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	6232010271	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K62 - Machine Tools	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD: BOLT, CS, 1-1/4 IN X 10-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 265MM;B7;BLK
LONG DESCRIPTION	STUD: BOLT, ALL-THREAD, 7 UNC, CS, ASTM A193-B7, SIZE: 1-1/4 IN X 10-1/2 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 265MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/4 IN
LENGTH	:265MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

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Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900239173	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 2 IN,	SHORT DESCRIPTION	STUDBOLT: 2IN-4.5UNC X 355MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 2 IN, LENGTH 14 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 7 TPI, GRADE B7,CADMIUM P LATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 2 IN, LENGTH 355MM, THREADS 4.5 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:2 IN
LENGTH	:355MM
THREADS	:4.5 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

Verified By  
Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234482	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	PC	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 1/2 IN, LENGTH 2-3/4	SHORT DESCRIPTION	STUDBOLT: 1/2-13UNC X 70MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1/2 IN, LENGTH 2-3/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 13 TPI, GRADE B7, CA DMIUM PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1/2 IN, LENGTH 70MM, THREADS 13 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1/2 IN
LENGTH	:70MM
THREADS	:13 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900252820	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K62 - Machine Tools	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN,	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 100MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN, LENGTH 4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7,CADMIUM PLATE D ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 100MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/4 IN
LENGTH	:100MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

Verified By  
Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102654	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: UNC 7/8 IN,	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 215MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 7/8 IN, LENGTH 216MM, FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 H EAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 215MM, THREADS 9 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:7/8 IN
LENGTH	:215MM
THREADS	:9 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900102654, 8138980551.

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900239141	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 1-1/2 IN,	SHORT DESCRIPTION	STUDBOLT: 1-1/2-6UNC X 290MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/2 IN, LENGTH 11-1/2 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 7 TPI, GRADE B7,C ADMIUM PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/2 IN, LENGTH 290MM, THREADS 6 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/2 IN
LENGTH	:290MM
THREADS	:6 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903000301	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	BOLT: STUD C/W NUTS	SHORT DESCRIPTION	STUDBOLT: 1-1/2-6UNC X 195MM;B7;BLK;NUT
LONG DESCRIPTION	BOLT: STUD C/W NUTS 1-1/2 IN X 7-3/4 IN BOLT: STUD C/W NUTS, 1-1/2" X 7-3/4", A-193 GR.B7 WITH A-194 GR.2H NUTS;	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/2 IN, LENGTH 195MM, THREADS 6 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/2 IN
LENGTH	:195MM
THREADS	:6 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903019678	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: UNC 5/8 IN,	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X 180MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 5/8 IN, LENGTH 178MM, FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 H EAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 5/8 IN, LENGTH 180MM, THREADS 11 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:5/8 IN
LENGTH	:180MM
THREADS	:11 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9903019678, 9900234470.

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900236557	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/Ni, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIA 1/2 IN, LENGTH 3-1/4 IN	SHORT DESCRIPTION	STUDBOLT: 1/2-13UNC X 80MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1/2 IN, LENGTH 3-1/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 13 TPI, GRADE B7,CAD MIUM PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, PITCH DIA. 0.0020 IN TO 0.0025 IN (H5), C/W MILL CERTIFICATES	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1/2 IN, LENGTH 80MM, THREADS 13 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1/2 IN
LENGTH	:80MM
THREADS	:13 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900236585	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIA 1-1/2 IN, LENGTH 11 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/2-6UNC X 280MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/2 IN, LENGTH 11 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 6 TPI, GRADE B7,CADMI UM PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, PITCH DIA. 0.0030 IN TO 0.0040 IN (H8), C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/2 IN, LENGTH 280MM, THREADS 6 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/2 IN
LENGTH	:280MM
THREADS	:6 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	6232010171	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K62 - Machine Tools	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/Ni, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS,SIZE: 7/8 IN X 9-1/4 IN LG	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 235MM;B7;FKM
LONG DESCRIPTION	STUD BOLT: CARBON STEEL, ASTM A193, B7, ALL-THREAD, UNC, SIZE: 7/8 IN X 9-1/4 IN LG	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 235MM, THREADS 9 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH FLUOROCARBON COATED

CHARACTERISTIC AND VALUE	
DIAMETER	:7/8 IN
LENGTH	:235MM
THREADS	:9 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:FLUOROCARBON COATED

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903074761	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: UNC 1-3/4 IN,	SHORT DESCRIPTION	STUDBOLT: 1-3/4-5UNC X 1000MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1-3/4 IN, LENGTH 1000MM, FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-3/4 IN, LENGTH 1000MM, THREADS 5 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-3/4 IN
LENGTH	:1000MM
THREADS	:5 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9913057575	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	35 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B8M CL 2, UNC, >495MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: ALL-THREAD, M12, 30 CM LG, 316	SHORT DESCRIPTION	STUDBOLT: M12-1.75 X 300MM; B8M; NUT
LONG DESCRIPTION	STUD BOLT: ALL-THREAD, M12, 30 CM, 1.75, SS 316	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER M12, LENGTH 300MM, THREADS 1.75MM, MATERIAL STAINLESS STEEL 316, SPECIFICATION ASTM A193, GRADE B8M, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-8M

CHARACTERISTIC AND VALUE	
DIAMETER	:M12
LENGTH	:300MM
THREADS	:1.75MM
MATERIAL	:STAINLESS STEEL 316
SPECIFICATION	:ASTM A193
GRADE	:B8M
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-8M

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138612051	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS, SIZE: 1-3/8 IN X 9-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-3/8-6UNC X 240MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, UNC, SIZE: 1-3/8 IN X 9-1/2 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-3/8 IN, LENGTH 240MM, THREADS 6 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-3/8 IN
LENGTH	:240MM
THREADS	:6 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

Verified By  
Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8186731353	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT AND NUT: ALL-THREAD, 1-5/8 IN	SHORT DESCRIPTION	STUDBOLT: 1-5/8-8UN X 290MM;B7;FKM;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: ALL-THREAD, 1-5/8 IN X 11-3/4 IN, UNC, CS, ASTM A193 - B7, ASTM A194 - 2H, FLUORO CARBON COATED	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-5/8 IN, LENGTH 290MM, THREADS 8 UN, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH FLUOROCARBON COATED, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-5/8 IN
LENGTH	:290MM
THREADS	:8 UN
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:FLUOROCARBON COATED
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 8138980501, 8138610011, 8186731353.

Prepared By  
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Verified By  
Star Energy Geothermal

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