

# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900236560	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 5/8 IN, LENGTH 4-1/4 IN	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X 110MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 5/8 IN, LENGTH 4-1/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 11 TPI, GRADE B7, CA DMIUM OR ZINC PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 5/8 IN, LENGTH 110MM, 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	:110MM
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

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	9900212537	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 X 5 IN, FULL THREAD	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 130MM;B7;CD;NUT
LONG DESCRIPTION	BOLT: STUD, 3/4 X 5 IN, FULL THREAD MATERIAL : ALLOY STEEL ASTM-A193 GR. B7; THREAD TYPE : UNC; FINISH : CADMIUM PLATED ASTM-B696; A DP; C/W. 2 EA HEX. NUTS ASTM-A194 GR. 2H;	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 130MM, 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	:130MM
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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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	9900236580	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 15 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 380MM;B7M;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN, LENGTH 15 IN FULL THREAD, SPECIFICATION A193, GR B7M, MATERIAL CARBON STEEL, UNC, GRADE B7M, C/W 2 HEA VY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 380MM, THREADS 7 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	:1-1/4 IN
LENGTH	:380MM
THREADS	:7 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):

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	9900102636	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, 140 MM FULL THRE	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 140MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 3/4 IN, LENGTH 140 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 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  
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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9913056144	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, M16 X 1000 MM, A193 GR B7	SHORT DESCRIPTION	STUDBOLT: M16-2.00 X 1000MM;B7;BLK;NUT
LONG DESCRIPTION	BOLT: STUD, FULL THREAD, SIZE M16 LENGTH 1000 MM, MATERIAL A193 GR B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER M16, LENGTH 1000MM, THREADS 2MM, 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	:M16
LENGTH	:1000MM
THREADS	:2MM
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

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900239144	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 250MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/2 IN, LENGTH 9-3/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 7 TPI, GRADE B7,CA DMIUM 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 250MM, 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	:250MM
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  
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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900245836	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, 2-1/2 X 18-1/2 IN,	SHORT DESCRIPTION	STUDBOLT: 2-1/2-8UN X 470MM;B7;CD
LONG DESCRIPTION	BOLT: STUD, 2-1/2 X 18-1/2 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 2-1/2 IN, LENGTH 470MM, THREADS 8 UN, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696

CHARACTERISTIC AND VALUE	
DIAMETER	:2-1/2 IN
LENGTH	:470MM
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  
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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234427	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;BLK;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, GRADE B7, C/W 2 HE AVY HEX NUTS ASTM A194 GR 2H	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 BLACK OXIDE, 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	: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): 9900234427, 9913056559.

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	9903005663	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: UNC 5/8 IN,	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X 50MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 5/8 INCH, LENGTH 50MM, 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 5/8 IN, LENGTH 50MM, 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	:50MM
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):

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	9900234448	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, LENGTH 4 IN	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 100MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 7/8 IN, LENGTH 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 7/8 IN, LENGTH 100MM, 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	:100MM
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): 9900234448, 9900102644.

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	8103591751	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 : SS, SIZE: 5/8 IN X 2 IN	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X 50MM;B8;NUT
LONG DESCRIPTION	STUD BOLT: STAINLESS STEEL AND NUT, ALL-THREAD, 11 UNC, SIZE: 5/8 IN X 2 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 5/8 IN, LENGTH 50MM, THREADS 11 UNC, MATERIAL STAINLESS STEEL 304, SPECIFICATION ASTM A193, GRADE B8, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-8

CHARACTERISTIC AND VALUE	
DIAMETER	:5/8 IN
LENGTH	:50MM
THREADS	:11 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):

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	8138612041	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, 1-3/8 IN X 10-1/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-3/8-6UNC X 260MM;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 10-1/4 IN	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  
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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138610101	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 IN X 2-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-8UNC X 65MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193-B7, ASTM A194-2H, ALL-THREAD, 8 UNC, SIZE: 1 IN X 2-1/2 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1 IN, LENGTH 65MM, 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	:65MM
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):

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	8138610901	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 7-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 195MM;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 7-3/4 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 195MM, 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	:195MM
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	9900212529	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, LENG 3-1/4 IN	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X 85MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 5/8 IN, LENGTH 3-1/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 11 TPI, GRADE B7, CA DMIUM 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 5/8 IN, LENGTH 85MM, 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	:85MM
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): 9900212529, 9900248655.

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	9900245831	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, FULL THREAD, DIA:	SHORT DESCRIPTION	STUDBOLT: 1-3/8-6UNC X 235MM;B7;CD
LONG DESCRIPTION	BOLT: STUD, FULL THREAD, DIA: 1-3/8 IN, LENGTH 9-1/4 IN MATERIAL : ALLOY STEEL ASTM-A193 GR. B7;THREAD TYPE : UNC; TPI : 8;FINISH : CADMIUM PLATED ASTM-B696;	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-3/8 IN, LENGTH 235MM, THREADS 6 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696

CHARACTERISTIC AND VALUE	
DIAMETER	:1-3/8 IN
LENGTH	:235MM
THREADS	:6 UNC
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

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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	8138980751	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 11-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-5/8-8UN X 300MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, 9 UNC, SIZE: 1-5/8 IN X 11-3/4 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-5/8 IN, LENGTH 300MM, 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	:300MM
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): 9900234421, 8138980751, 9900105719.

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	9900102714	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 1-1/2 IN,	SHORT DESCRIPTION	STUDBOLT: 1-1/2-6UNC X 205MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1-1/2 IN, LENGTH 203 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 1-1/2 IN, LENGTH 205MM, 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	:205MM
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	8138611381	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 7-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 190MM;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 7-1/2 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 190MM, 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	:190MM
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

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234433	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 8-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 220MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN, LENGTH 8-3/4 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 1-1/4 IN, LENGTH 220MM, 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	:220MM
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

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138610351	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 1 IN, 5-1/2 IN, UNC, B7,	SHORT DESCRIPTION	STUDBOLT: 1-8UNC X 140MM;B7;FKM;NUT
LONG DESCRIPTION	STUD: BOLT AND NUT ALL-THREAD, 1 IN, 5-1/2 IN,UNC, CS, ASTM A193 - B7, ASTM A194 - 2H, FLUORO CARBON COATED	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1 IN, LENGTH 140MM, THREADS 8 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	:1 IN
LENGTH	:140MM
THREADS	:8 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):

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	9903019680	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, 100MM FULL THREAD	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X 100MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 5/8 IN, LENGTH 100MM, 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 100MM, 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	:100MM
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):

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	9900234470	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 7 IN	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X 180MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 5/8 IN, LENGTH 7 IN 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	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

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	6232010191	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:CHROME, SIZE, 1 IN X 2 IN LG	SHORT DESCRIPTION	STUDBOLT: 1-8UNC X 25MM;B7;CP
LONG DESCRIPTION	STUD BOLT:CHROME, CS, ASTM A193-B7, ALL-THREAD, UNC, SIZE, 1 IN X 2 IN LG	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1 IN, LENGTH 25MM, THREADS 8 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CHROME PLATED

CHARACTERISTIC AND VALUE	
DIAMETER	:1 IN
LENGTH	:25MM
THREADS	:8 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CHROME PLATED

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	9913054350	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 : UNC 1 IN, LENGTH 140MM	SHORT DESCRIPTION	STUDBOLT: 1-8UNC X 140MM;B8;NUT
LONG DESCRIPTION	STUD BOLT : UNC 1 IN, LENGTH 140MM FULL THREAD, C/W 2EA NUTS, BOLTS ASTM A193 B8 CLASS 2, NUTS ASTM A194 GRADE 8, BOLTS & NUT MATERIAL SUS-304 HARDENED, 14 IN FLANGES NPS, 150 LBS RATING	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1 IN, LENGTH 140MM, THREADS 8 UNC, MATERIAL STAINLESS STEEL 304, SPECIFICATION ASTM A193, GRADE B8, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-8

CHARACTERISTIC AND VALUE	
DIAMETER	:1 IN
LENGTH	:140MM
THREADS	:8 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):

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	9900105000	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
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: DIAMETER 1-3/4 IN,	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 285MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-3/4 IN, LENGTH 11-1/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H AND COMPLETE WITH MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 285MM, 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	:285MM
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

Verified By  
Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903000303	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 240MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1-1/4 IN, LENGTH 240MM, 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 240MM, 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	:240MM
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): 8138980201, 9903000303, 9900102695.

Prepared By  
PT. Sinergi Solusi Teknik

Verified By  
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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9913057574	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,M12,40 CM LG, 316	SHORT DESCRIPTION	STUDBOLT: M12-1.75 X 500MM;B8M
LONG DESCRIPTION	STUD BOLT: ALL-THREAD, M12, 50 CM, 1.75, SS 316	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER M12, LENGTH 500MM, THREADS 1.75MM, MATERIAL STAINLESS STEEL 316, SPECIFICATION ASTM A193, GRADE B8M

CHARACTERISTIC AND VALUE	
DIAMETER	:M12
LENGTH	:500MM
THREADS	:1.75MM
MATERIAL	:STAINLESS STEEL 316
SPECIFICATION	:ASTM A193
GRADE	:B8M

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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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9913056154	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, 1/2 UNC X 1000 MM, A193 GR B7	SHORT DESCRIPTION	STUDBOLT: 1/2-13UNC X 1000MM;B7;BLK;NUT
LONG DESCRIPTION	BOLT: STUD, FULL THREAD, SIZE 1/2 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 1/2 IN, LENGTH 1000MM, THREADS 13 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	: 1/2 IN
LENGTH	: 1000MM
THREADS	: 13 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	9900239171	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	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 IN,	SHORT DESCRIPTION	STUDBOLT: 1-8UNC X 160MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1 IN, LENGTH 6-1/4 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 IN, LENGTH 160MM, 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	:160MM
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): 9900234445, 9900239171, 9900245822, 9900104673, 8138611041.

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	9900212541	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 1/2 IN, LENGTH 3 IN	SHORT DESCRIPTION	STUDBOLT: 1/2-13UNC X 75MM;B7;CD;NUT
LONG DESCRIPTION	BOLT: STUD, DIAMETER 1/2 IN, LENGTH 3 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 13 TPI, GRADE B7, CADMI UM PLATED ASTM-B696, DELIVERY COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H AND MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1/2 IN, LENGTH 75MM, 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	:75MM
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	9900236564	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 3 IN	SHORT DESCRIPTION	STUDBOLT: 1-8UNC X 75MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1 IN, LENGTH 3 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7,CADMIUM PLATED AS TM-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 1 IN, LENGTH 75MM, THREADS 8 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 IN
LENGTH	:75MM
THREADS	:8 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	8138611321	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: 7/8 IN X 6-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 165MM;B7;CP;NUT
LONG DESCRIPTION	STUD: BOLT, CROME AND NUT, ALL-THREAD, 9 UNC, CS, ASTM A193 - B7, ASTM A194 - 2H, SIZE: 7/8 IN X 6-1/2 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 165MM, THREADS 9 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	:7/8 IN
LENGTH	:165MM
THREADS	:9 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	8138110101	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	BOLT AND NUT: SIZE 1-1/4 IN X 9 IN, CS	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 230MM;B7;FKM;NUT
LONG DESCRIPTION	BOLT AND NUT: ALL-THREAD, SIZE 1-1/4 IN X 9 IN, CARBON STEEL, ASTM A193-B6, ASTM A194-2H, 7 UNC, FLUORO CARBON COATED	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 FLUOROCARBON COATED, 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	: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):

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	9900249495	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	BOLT: STUD, 1-1/8 X 6-1/2 IN,	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 165MM;B8M;NUT
LONG DESCRIPTION	BOLT: STUD, 1-1/8 X 6-1/2 IN, FULL THREAD MATERIAL : ALLOY STEEL ASTM-A193;GR. B8M CL2; C/W 2 EA HEX. NUTS;ASTM 194 GR. 8M HEAVY HEX ;	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/8 IN, LENGTH 165MM, THREADS 7 UNC, MATERIAL STAINLESS STEEL 316, SPECIFICATION ASTM A193, GRADE B8M, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-8M

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/8 IN
LENGTH	:165MM
THREADS	:7 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	9900105466	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 1-7/8 IN,	SHORT DESCRIPTION	STUDBOLT: 1-7/8-8UN X 485MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1-7/8 IN, LENGTH 483MM, 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 1-7/8 IN, LENGTH 485MM, 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	:1-7/8 IN
LENGTH	:485MM
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

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234481	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 3/8 IN, LENGTH 5-1/2	SHORT DESCRIPTION	STUDBOLT: 3/8-16UNC X 140MM;B7M;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 3/8 IN, LENGTH 5-1/2 IN FULL THREAD, SPECIFICATION A193, GR B7M, MATERIAL CARBON STEEL,UNC, GRADE B7M, C/W 2 HEA VY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/8 IN, LENGTH 140MM, THREADS 16 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	:3/8 IN
LENGTH	:140MM
THREADS	:16 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):

Prepared By  
PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234443	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, LENGTH 8 IN	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 205MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 7/8 IN, LENGTH 8 IN 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	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 205MM, 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	:205MM
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): 8138611401, 8138611421, 9900234443.

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	9900255278	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,	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 295MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 7/8 IN, LENGTH 11-1/2 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7,CADMIUM PLATED ASTM-B696, 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 295MM, 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	:295MM
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	9900212568	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, LENGTH	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 145MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/8 IN, LENGTH 5-3/4 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 1-1/8 IN, LENGTH 145MM, 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	:145MM
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): 9900212568, 9903008853.

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	8138610501	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 12-1/8 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/2-6UNC X 310MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, 6 UNC, SIZE: 1-1/2 IN X 12-1/8 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/2 IN, LENGTH 310MM, 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	:310MM
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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Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234477	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 3 IN	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 75MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 3/4 IN, LENGTH 3 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 75MM, 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	: 75MM
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): 9900234477, 8138610141.

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	9900239162	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 165MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/8 IN, LENGTH 6-1/2 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 7 TPI, GRADE B7,CA DMIUM PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/8 IN, LENGTH 165MM, 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	:165MM
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

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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	6232010051	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:CHROME,SIZE: 1/2 INX2-1/2IN LG	SHORT DESCRIPTION	STUDBOLT: 1/2-13UNC X 65MM;B7;CP
LONG DESCRIPTION	STUD BOLT: CHROME, ASTM A193-B7 ALL-THREAD, UNC, SIZE: 1/2 INX2-1/2IN LG	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1/2 IN, LENGTH 65MM, THREADS 13 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CHROME PLATED

CHARACTERISTIC AND VALUE	
DIAMETER	:1/2 IN
LENGTH	:65MM
THREADS	:13 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CHROME PLATED

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	8138611771	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 IN X 10-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-8UNC X 265MM;B7;BLK;NUT
LONG DESCRIPTION	STUD: BOLT, CARBON STEEL AND NUT, ALL-THREAD, 8 UNC, CS, ASTM A193 - B7, ASTM A194 - 2H, SIZE: 1 IN X 10-1/2 IN	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

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234434	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 9-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 240MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN, LENGTH 9-1/2 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 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 1-1/4 IN, LENGTH 240MM, 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	:240MM
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): 9900239156, 9900234434.

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	9900102656	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 270MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 7/8 IN, LENGTH 267MM, 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 270MM, 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	:270MM
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

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611461	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 10 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/2-6UNC X 255MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, 6 UNC, SIZE: 1-1/2 IN X 10 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/2 IN, LENGTH 255MM, 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	:255MM
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	9913056141	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, M10 X 1000 MM, A193 GR B7	SHORT DESCRIPTION	STUDBOLT: M10-1.50 X 1000MM;B7;BLK;NUT
LONG DESCRIPTION	BOLT: STUD, FULL THREAD, SIZE M10 LENGTH 1000 MM, MATERIAL A193 GR B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER M10, LENGTH 1000MM, THREADS 1.5MM, 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	:M10
LENGTH	:1000MM
THREADS	:1.5MM
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	9900236575	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 5-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 140MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN, LENGTH 5-1/2 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 7 TPI, GRADE B7,CA DMIUM 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 140MM, 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	:140MM
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

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102647	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,	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 140MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 7/8 IN, LENGTH 140MM, 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 140MM, 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	:140MM
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): 9900102614, 9900102647, 9900234451.

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	9913056405	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K77 - Valve	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 1/8 IN X 10 1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 265MM;B7M;BLK;NUT
LONG DESCRIPTION	BOLT: STUD, 1 1/8 IN X 10 1/2 IN, ASTM-A193, GR B7M, UNC, W/2EA HX. NUTS, ASTM0194, GR.2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/8 IN, LENGTH 265MM, THREADS 7 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	:1-1/8 IN
LENGTH	:265MM
THREADS	:7 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):

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	6232010031	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: CHROME,SIZE: 1/2 IN X 2 IN LG	SHORT DESCRIPTION	STUDBOLT: 1/2-13UNC X 50MM;B7;CP
LONG DESCRIPTION	STUD BOLT: CHROME, ASTM A193-B7, ALL-THREAD, 13 UNC, SIZE: 1/2 IN X 2 IN LONG	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1/2 IN, LENGTH 50MM, THREADS 13 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CHROME PLATED

CHARACTERISTIC AND VALUE	
DIAMETER	:1/2 IN
LENGTH	:50MM
THREADS	:13 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CHROME PLATED

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	9900212536	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 X 4-1/4 IN, FULL THREAD	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 110MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: SIZE 3/4 IN X 4-1/4 IN, FULL THREAD, MATERIAL ALLOY STEEL ASTM-A193 GR. B7, THREAD TYPE UNC, FINISH: CADMIUM PLATED ASTM- B69 6, ADP, COMPLETE WITH 2 EA HEXAGONAL NUTS ASTM-A194 GR. 2H, COMPLETE WITH MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 110MM, 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	:110MM
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): 9900212536, 9900236559.

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	9900221483	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 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 HEA VY HEX NUTS ASTM A194 GR 2H	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.

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	6232010131	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:CHROME, SIZE: 5/8 IN X 1 IN LG	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X 25MM;B7;CP
LONG DESCRIPTION	STUD BOLT:CHROME, ASTM A193-B7, ALL-THREAD, UNC, SIZE: 5/8 IN X 1 IN LG	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 5/8 IN, LENGTH 25MM, THREADS 11 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CHROME PLATED

CHARACTERISTIC AND VALUE	
DIAMETER	:5/8 IN
LENGTH	:25MM
THREADS	:11 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CHROME PLATED

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	8138611481	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 IN X 10 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 255MM;B7;CP;NUT
LONG DESCRIPTION	STUD: BOLT, CROME AND NUT, ALL-THREAD, 7 UNC, CS, ASTM A193 - B7, ASTM A194 - 2H, SIZE: 1-1/4 IN X 10 IN	LONG DESCRIPTION	STUD-BOLT: ALL- THREAD, DIAMETER 1- 1/4 IN, LENGTH 255MM, 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	:255MM
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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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	9900212535	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 X 3-3/4 IN, FULL THREAD	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 95MM;B7;CD;NUT
LONG DESCRIPTION	BOLT: STUD, 3/4 X 3-3/4 IN, FULL THREAD MATERIAL : ALLOY STEEL ASTM-A193 GR. B7; THREAD TYPE : UNC; FINISH : CADMIUM PLATED ASTM- B6 96; ADP; C/W. 2 EA HEX. NUTS ASTM-A194 GR. 2H;	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	8138611601	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:CS, SIZE: 1/2 IN X 3-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 1/2-13UNC X 95MM;B8M
LONG DESCRIPTION	STUD BOLT: ALL-THREAD, 13 UNC, B8M, 8M, SIZE: 1/2 IN X 3-3/4 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1/2 IN, LENGTH 95MM, THREADS 13 UNC, MATERIAL STAINLESS STEEL 316, SPECIFICATION ASTM A193, GRADE B8M

CHARACTERISTIC AND VALUE	
DIAMETER	:1/2 IN
LENGTH	:95MM
THREADS	:13 UNC
MATERIAL	:STAINLESS STEEL 316
SPECIFICATION	:ASTM A193
GRADE	:B8M

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	8138612281	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	STUDBOLT-NUT: 1-3/4 IN X 11-3/4 IN, UNC, B7	SHORT DESCRIPTION	STUDBOLT: 1-3/4-5UNC X 300MM; B7; FKM; NUT
LONG DESCRIPTION	STUD BOLT AND NUT: ALL-THREAD, 1-3/4 IN X 11-3/4 IN, UNC, CS, ASTM A193 - B7, ASTM A194 - 2H, FLUORO CARBON COATED	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-3/4 IN, LENGTH 300MM, THREADS 5 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	: 1-3/4 IN
LENGTH	: 300MM
THREADS	: 5 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):

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	8103110161	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 11-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-5/8-8UN X 300MM;B7;FKM
LONG DESCRIPTION	STUD BOLT: UNC, ASTM A193-B7, ALL-THREAD, SIZE: 1-5/8 IN X 11-3/4 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-5/8 IN, LENGTH 300MM, THREADS 8 UN, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH FLUOROCARBON COATED

CHARACTERISTIC AND VALUE	
DIAMETER	:1-5/8 IN
LENGTH	:300MM
THREADS	:8 UN
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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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	9900234421	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 1-5/8 IN, LENGTH 11-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-5/8-8UN X 300MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-5/8 IN, LENGTH 11-3/4 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 1-5/8 IN, LENGTH 300MM, 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	:300MM
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): 9900234421, 8138980751, 9900105719.

Prepared By  
PT. Sinergi Solusi Teknik

Verified By  
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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138980501	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: SIZE 1-5/8 IN X 11-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-5/8-8UN X 290MM;B7;FKM;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: ALL-THREAD, SIZE 1-5/8 IN X 11-1/2 IN, CARBON STEEL, ASTM A193-B7, ASTM A194 - 2H, 7 UNC, 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  
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	8138611041	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 IN X 6-1/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-8UNC X 160MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B2, ASTM A194 - 2H, ALL-THREAD, UNC, SIZE: 1 IN X 6-1/4 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1 IN, LENGTH 160MM, 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	:160MM
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): 9900234445, 9900239171, 9900245822, 9900104673, 8138611041.

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	8138980511	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 6-1/4 IN	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 160MM;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 6-1/4 IN	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.

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	8138610921	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 IN X 2 IN	SHORT DESCRIPTION	STUDBOLT: 1-8UNC X 50MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, 8 UNC, SIZE: 1 IN X 2 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1 IN, LENGTH 50MM, 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	:50MM
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):

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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	9900236587	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: DIA 1-5/8 IN, LENGTH 10-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-5/8-8UN X 265MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-5/8 IN, LENGTH 10-1/2 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 1-5/8 IN, LENGTH 265MM, 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	:265MM
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	9900245814	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 1/2 IN,	SHORT DESCRIPTION	STUDBOLT: 1/2-13UNC X 65MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1/2 IN, LENGTH 2-1/2 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	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1/2 IN, LENGTH 65MM, 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	:65MM
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): 9900245814, 9900212540.

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900239135	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 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, 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 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	9900239161	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 370MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/8 IN, LENGTH 14-1/2 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 1-1/8 IN, LENGTH 370MM, 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	:370MM
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):

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900236589	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 1-5/8 IN,	SHORT DESCRIPTION	STUDBOLT: 1-5/8-8UN X 290MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-5/8 IN, LENGTH 11-1/2 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7,CADMIUM PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-5/8 IN, LENGTH 290MM, THREADS 8 UN, 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	:1-5/8 IN
LENGTH	:290MM
THREADS	:8 UN
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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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138610331	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-NUT 1-1/4" x 9-7/8"	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 250MM;B7;BLK;NUT
LONG DESCRIPTION	STUD: BOLT-NUT, SIZE: 1-1/4 IN X 9-7/8 IN	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.

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611101	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 1-1/4 IN, 7 IN, UNC, B7,	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 175MM;B7;FKM;NUT
LONG DESCRIPTION	STUD: BOLT AND NUT ALL-THREAD, 1-1/4 IN, 7 IN, UNC, CS, ASTM A193 - B7, ASTM A194 - 2H, FLUORO CARBON COATED	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 175MM, THREADS 7 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	:1-1/4 IN
LENGTH	:175MM
THREADS	:7 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	9900105301	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 330MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 7/8 IN, LENGTH 330MM, 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 330MM, 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	:330MM
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):

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138610661	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 1/2 IN, 3 IN, UNC, B7, 2H	SHORT DESCRIPTION	STUDBOLT: 1/2-13UNC X 75MM;B7;FKM;NUT
LONG DESCRIPTION	STUD: BOLT AND NUT ALL-THREAD, 1/2 IN, 3 IN, UNC, CS, ASTM A193 - B7, ASTM A194 - 2H, FLUORO CARBON COATED	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1/2 IN, LENGTH 75MM, THREADS 13 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	:1/2 IN
LENGTH	:75MM
THREADS	:13 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	8138611171	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: 1-7/8 IN X 14 IN	SHORT DESCRIPTION	STUDBOLT: 1-7/8-8UN X 355MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, UNC, SIZE: 1-7/8 IN X 14 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-7/8 IN, LENGTH 355MM, 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	:1-7/8 IN
LENGTH	:355MM
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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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903072717	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: ALL-THREAD,GR B7 COATED ZINC	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 330MM;B7;ZP;NUT
LONG DESCRIPTION	STUD BOLT: ALL-THREAD,GR B7 COATED ZINC PLATE,GRADE B7 SPECIFICATION ASTM A193,LENGTH 13 IN,TYPE FULL THREAD,MATERIAL CS,DIAMETER 1- 1/8 IN,THREADS 8 TPI,C/W 2 HVY HEX NUTS ASTM A194 GR 2H,BOLT: STUD, 1-1/8 IN DIA X 13 IN LENGTH FULL THREAD, MATERIAL CARBON STEEL, SPECIFICATION ASTM-A193 GR. B7, UNC, 8 TPI, C/W 2 EA HEX. NUTS ASTM-A194 GR. 2H AND MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/8 IN, LENGTH 330MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH ZINC PLATED, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/8 IN
LENGTH	:330MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:ZINC 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

Verified By  
Star Energy Geothermal



# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900212547	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, LENG 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 HEAV Y HEX NUTS ASTM A194 GR 2H AND C/W MILL CERTIFICATE	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.

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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	9900236562	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 5/8 IN, LENGTH 4-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X 120MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 5/8 IN, LENGTH 4-3/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 11 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 5/8 IN, LENGTH 120MM, 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	:120MM
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):

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138110011	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, 2H, B7, 3/4 IN X 6 IN	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 150MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: CARBON STEEL, 2H, B7, 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	8138610061	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: 1-1/4 IN X 8-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 215MM;B7;BLK;NUT
LONG DESCRIPTION	STUD: BOLT, CARBON STEEL, 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 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.

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102722	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 2 IN,	SHORT DESCRIPTION	STUDBOLT: 2IN-4.5UNC X 330MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 2 IN, LENGTH 330MM, FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 HEA VY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 2 IN, LENGTH 330MM, 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	: 330MM
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):

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900239146	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 520MM;B7;CD;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, 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 1-1/4 IN, LENGTH 520MM, 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	:520MM
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):

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903017803	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	STUDBOLT: W/NUTS, M22 X 110 LG	SHORT DESCRIPTION	STUDBOLT: M22-2.50 X 110MM;B7;BLK;NUT
LONG DESCRIPTION	STUDBOLT: W/NUTS, M22 X 110 LONG, ASTM A193 GR B7, A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER M22, LENGTH 110MM, THREADS 2.5MM, 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	:M22
LENGTH	:110MM
THREADS	:2.5MM
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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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900104663	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 1-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/2-6UNC X 295MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1-1/2 IN, LENGTH 292MM 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 1-1/2 IN, LENGTH 295MM, 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	:295MM
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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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611541	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: CSCROME, SIZE: 1-5/8 INX 2 IN	SHORT DESCRIPTION	STUDBOLT: 1-5/8-12UN X 305MM;B7;CP;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL CROME, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, 12 UNC, SIZE: 1-5/8 IN X 12 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-5/8 IN, LENGTH 305MM, THREADS 12 UN, 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	:1-5/8 IN
LENGTH	:305MM
THREADS	:12 UN
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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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234720	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,	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X 150MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 5/8 IN, LENGTH 6 IN 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	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 5/8 IN, LENGTH 150MM, 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	:150MM
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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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9913055957	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K76 - Fittings and Flanges	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 : DIAMETER 3/4 IN	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 100MM;B8;NUT
LONG DESCRIPTION	STUD BOLT : DIAMETER 3/4 IN X LENGTH 4 IN, FULL THREAD, MATERIAL A193 GR.B8, UNC, C/W 2 HEAVY HEX. NUTS A194 GR.8 SS 304, [PMI (POSITIVE MATERIAL IDENTIFICATION) WILL BE CONDUCTED BY STAR ENERGY WAREHOUSE]	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 100MM, 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	: 100MM
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): 9903008849, 9913055957.

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900216482	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, LE 10-5/8 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/2-6UNC X 270MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/2 IN, LENGTH 10-5/8 IN FULL THREAD, SPECIFICATION A193, MATERIAL CARBON STEEL, UNC, GRADE B7, C/W 2 HEAVY H EX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/2 IN, LENGTH 270MM, 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	:270MM
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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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903003149	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: 1-3/4IN X 11-1/4IN A193 GR B7	SHORT DESCRIPTION	STUDBOLT: 1-3/4-5UNC X 285MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-3/4 IN, LENGTH 11-1/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7,C/W 2 HE AVY HEX NUTS ASTM A194 GR 2H, C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-3/4 IN, LENGTH 285MM, 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	:285MM
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): 9903003149, 9900104999.

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	9900234451	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 7/8 IN, LE 5-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 140MM;B7;BLK;NUT
LONG DESCRIPTION	BOLT: STUD, DIAMETER 7/8 IN, LENGTH 5-1/2 IN FULL THREAD, SPECIFICATION A193, MATERIAL CARBON STEEL, UNC, GRADE B7, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 140MM, 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	:140MM
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): 9900102614, 9900102647, 9900234451.

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	8138610021	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 180	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 180MM;B7;BLK
LONG DESCRIPTION	STUD BOLT: CARBON STEEL, SIZE: 7/8 IN X 180	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 180MM, THREADS 9 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE

CHARACTERISTIC AND VALUE	
DIAMETER	:7/8 IN
LENGTH	:180MM
THREADS	:9 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):

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138980101	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 INX9-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 250MM:B7;CP;NUT
LONG DESCRIPTION	STUD BOLT: CROME AND NUT, ALL-THREAD, 1-1/4", 9-3/4", 7 UNC, ASTM A193 - B7, ASTM A 194 -2H, SIZE: 1-1/4 INX9-3/4 IN	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 CHROME PLATED, 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	: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	9900102619	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 1 IN,	SHORT DESCRIPTION	STUDBOLT: 1-8UNC X 460MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1 IN, LENGTH 460 MM, FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 HE AVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1 IN, LENGTH 460MM, 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	:460MM
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):

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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	9900236558	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 3-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1/2-13UNC X 90MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1/2 IN, LENGTH 3-1/2 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 90MM, 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	:90MM
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	9913055959	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K76 - Fittings and Flanges	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 : DIAMETER 3/4 IN	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 115MM;B8;NUT
LONG DESCRIPTION	STUD BOLT : DIAMETER 3/4 IN X LENGTH 4-1/2 IN, FULL THREAD, MATERIAL A193 GR.B8, UNC, C/W 2 HEAVY HEX. NUTS A194 GR.8 SS 304, [PMI (POSITIVE MATERIAL IDENTIFICATION) WILL BE CONDUCTED BY STAR ENERGY WAREHOUSE]	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 115MM, 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	: 115MM
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	9900216495	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, 7-1/2MM FULL THRE	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 190MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 3/4 IN, LENGTH 7-1/2 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 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.

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	9900239150	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 170MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN, LENGTH 6-3/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, C/W 2 HE AVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 170MM, 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	:170MM
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

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900239145	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 230MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/2 IN, LENGTH 9 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 1-1/2 IN, LENGTH 230MM, 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	:230MM
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

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102649	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 153MM, 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.

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