

# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903003148	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: 1-1/4 IN X8-1/2 IN A193 GR B7	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 215MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN, LENGTH 8-1/2 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7,C/W 2 HEA VY HEX NUTS ASTM A194 GR 2H, C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 215MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

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

MANUFACTURER	MANUFACTURER REF
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## PHYSICAL INSPECTION RESULT:

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

Prepared By  
PT. Sinergi Solusi Teknik

Verified By  
Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900249496	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	BOLT: STUD, 5/8 X 3-1/2 IN,	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X 90MM;B7;BLK;NUT
LONG DESCRIPTION	BOLT: STUD, 5/8 X 3-1/2 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 5/8 IN, LENGTH 90MM, 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	:90MM
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): 9900234716, 9900249496, 9900102628, 8138611731.

Prepared By  
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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900236577	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 9-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 245MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN, LENGTH 9-3/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 11 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 245MM, 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	:245MM
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  
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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9913056142	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, M12 X 1000 MM, A193 GR B7	SHORT DESCRIPTION	STUDBOLT: M12-1.75 X 1000MM;B7;BLK;NUT
LONG DESCRIPTION	BOLT: STUD, FULL THREAD, SIZE M12 LENGTH 1000 MM, MATERIAL A193 GR B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER M12, LENGTH 1000MM, THREADS 1.75MM, 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	:M12
LENGTH	:1000MM
THREADS	:1.75MM
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	9900212567	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 7-1/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-8UNC X 185MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1 IN, LENGTH 7-1/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 8 TPI, GRADE B7, CADMIUM PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, PITCH DIA. 0.0025 IN TO 0.0030 IN (H6), C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1 IN, LENGTH 185MM, 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	:185MM
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):

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9913056149	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, M36 X 1000 MM, A193 GR B7	SHORT DESCRIPTION	STUDBOLT: M36-4.00 X 1000MM;B7;BLK;NUT
LONG DESCRIPTION	BOLT: STUD, FULL THREAD, SIZE M36 LENGTH 1000 MM, MATERIAL A193 GR B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER M36, LENGTH 1000MM, THREADS 4MM, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:M36
LENGTH	:1000MM
THREADS	:4MM
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9913056158	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 UNC X 1000 MM, A193 GR B7	SHORT DESCRIPTION	STUDBOLT: 1-8UNC X 1000MM;B7;BLK;NUT
LONG DESCRIPTION	BOLT: STUD, FULL THREAD, SIZE 1 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 IN, LENGTH 1000MM, 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	:1000MM
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  
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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102617	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 200MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1 IN, LENGTH 200MM, 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 1 IN, LENGTH 200MM, 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	:200MM
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): 9900102668, 9900102617.

Prepared By  
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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900252818	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K62 - Machine Tools	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 1-1/2 IN,	SHORT DESCRIPTION	STUDBOLT: 1-1/2-6UNC X 270MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/2 IN, LENGTH 10-3/4 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 1-1/2 IN, LENGTH 270MM, 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	:270MM
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): 9900236583, 9900252818.

Prepared By  
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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903008856	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: 1-1/4 IN X 7-1/4 IN, A193 B7	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 185MM;B8;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN, LENGTH 7-1/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL STAINLESS STEEL 304, UNC, GRADE B7, C /W 2 HEAVY HEX NUTS SS 304 ASTM A194 GR 2H, [PMI (POSITIVE MATERIAL IDENTIFICATION) WILL BE CONDUCTED BY STAR ENERGY WAREHOUSE]	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 185MM, THREADS 7 UNC, MATERIAL STAINLESS STEEL 304, SPECIFICATION ASTM A193, GRADE B8, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-8

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/4 IN
LENGTH	:185MM
THREADS	:7 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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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900236583	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 10-5/8 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/2-6UNC X 270MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/2 IN, LENGTH 10-5/8 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 6 TPI, GRADE B7,C ADMIMUM PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, PITCH DIA. 0.0030 IN TO 0.0040 IN (H8), C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/2 IN, LENGTH 270MM, 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	:270MM
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): 9900236583, 9900252818.

Prepared By  
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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234459	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 9 IN	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 230MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 3/4 IN, LENGTH 9 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 230MM, 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	: 230MM
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): 9900234459, 9900102640.

Prepared By  
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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611971	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 AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, UNC, 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.

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	9913056407	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	BOLT: STUD, 5/8 IN X 3-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X 95MM;B8;NUT
LONG DESCRIPTION	BOLT: STUD, DIAMETER 5/8 IN X LENGTH 3-3/4 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 5/8 IN, LENGTH 95MM, 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	:95MM
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):

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611821	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 5-7/8 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 150MM;B7;FKM;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, 7 UNC, SIZE: 1-1/4 IN X 5-7/8 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 150MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH FLUOROCARBON COATED, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H, C/W 2 FLAT WASHER ASTM F436

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/4 IN
LENGTH	:150MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:FLUOROCARBON COATED
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H
ADDITIONAL ITEMS	:C/W 2 FLAT WASHER ASTM F436

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900212562	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 10 IN	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 255MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 7/8 IN, LENGTH 10 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 9 TPI, GRADE B7, CADMIUM PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, PITCH DIA. 0.0025 IN TO 0.0030 IN (H6), C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 255MM, 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	:255MM
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):

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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	9913056162	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,1-1/2-8UN X 150 MM,A193 GR B7	SHORT DESCRIPTION	STUDBOLT: 1-1/2-8UN X 150MM;B7;BLK;NUT
LONG DESCRIPTION	BOLT: STUD, FULL THREAD, SIZE 1-1/2 IN-8UN LENGTH 150 MM, MATERIAL A193 GR B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/2 IN, LENGTH 150MM, 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	:1-1/2 IN
LENGTH	:150MM
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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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900212569	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 6 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 150MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/8 IN, LENGTH 6 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 8 TPI, GRADE B7, CADMI UM PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, PITCH DIA. 0.0030 IN TO 0.0040 IN (H8), C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/8 IN, LENGTH 150MM, 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	:150MM
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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PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611731	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT-NUT, 5/8", 3-1/2", UNC, A193-B7, 2H	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X 90MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT, ALL-THREAD, 5/8", 3-1/2", 11 UNC, CS, ASTM A193 - B7, ASTM A194 - 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 5/8 IN, LENGTH 90MM, 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	:90MM
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): 9900234716, 9900249496, 9900102628, 8138611731.

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	8138610371	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT AND NUT: ALL-THREAD	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 170MM;B7;FKM;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: ALL-THREAD, 7/8 IN, 6-3/4 IN, UNC, CS, ASTM A193 - B7, ASTM A194 - 2H, FLUORO CARBON COATED	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 170MM, THREADS 9 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	:7/8 IN
LENGTH	:170MM
THREADS	:9 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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PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	6232010091	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K62 - Machine Tools	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/Ni, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS, SIZE: 3/4 IN X 1 IN LG	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 25MM;B7;BLK
LONG DESCRIPTION	STUD BOLT: CARBON STEEL, ASTM A193, B7, ALL-THREAD, UNC, SIZE: 3/4 IN X 1 IN LG	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 25MM, THREADS 10 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE

CHARACTERISTIC AND VALUE	
DIAMETER	: 3/4 IN
LENGTH	: 25MM
THREADS	: 10 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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PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900212571	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 1-1/8 IN, LENGTH	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 170MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/8 IN, LENGTH 6-3/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 8 TPI, GRADE B7, C ADMIUM PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H AND C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/8 IN, LENGTH 170MM, 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	:170MM
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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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138610181	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", 7-1/2", UNC, B7, 2H	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 190MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT, ALL-THREAD, 1-1/4", 7-1/2", 7 UNC, CS, ASTM A193-B7	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 190MM, 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	:190MM
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): 8138610181, 9900239151.

Prepared By  
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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138610151	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/Ni, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS, SIZE: 3/4 IN X 1 IN	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 25MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193-B7, ASTM A194-2H, ALL-THREAD, 10 UNC, SIZE: 3/4 IN X 1 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 25MM, 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	: 25MM
THREADS	: 10 UNC
MATERIAL	: ALLOY STEEL
SPECIFICATION	: ASTM A193
GRADE	: B7
FINISH	: BLACK OXIDE
ADDITIONAL ITEMS	: C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138612151	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 4-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 120MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, UNC, SIZE: 7/8 IN X 4-3/4 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 120MM, 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	:120MM
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): 9900239138, 9913056557, 8138611281, 8138612151.

Prepared By  
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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900236565	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIA 1-1/8 IN, LENGTH 3-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 95MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/8 IN, LENGTH 3-3/4 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, PITCH DIA. 0.0030 IN TO 0.0040 IN (H8), C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/8 IN, LENGTH 95MM, 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	:95MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

Verified By  
Star Energy Geothermal

(.....)

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900236586	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 10 IN	SHORT DESCRIPTION	STUDBOLT: 1-5/8-8UN X 255MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-5/8 IN, LENGTH 10 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 255MM, 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	:255MM
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):

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	9913056140	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, M8 X 1000 MM, A193 GR B7	SHORT DESCRIPTION	STUDBOLT: M8-1.25 X 1000MM;B7;BLK;NUT
LONG DESCRIPTION	BOLT: STUD, FULL THREAD, SIZE M8 LENGTH 1000 MM, MATERIAL A193 GR B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER M8, LENGTH 1000MM, THREADS 1.25MM, 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	:M8
LENGTH	:1000MM
THREADS	:1.25MM
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	8138611031	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: 1-1/8 IN X 7-1/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 185MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, 7 UNC, SIZE: 1-1/8 IN X 7-1/4 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/8 IN, LENGTH 185MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/8 IN
LENGTH	:185MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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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	9900234457	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/Ni, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 3/4 IN, LENGTH 8 IN	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 205MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 3/4 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 3/4 IN, LENGTH 205MM, 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	: 205MM
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):

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611421	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 8 IN	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 205MM;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 8 IN	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.

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903019681	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,	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 255MM;B8M;NUT
LONG DESCRIPTION	STUD BOLT: UNC 3/4 IN, LENGTH 254 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 255MM, THREADS 10 UNC, MATERIAL STAINLESS STEEL 316, SPECIFICATION ASTM A193, GRADE B8M, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-8M

CHARACTERISTIC AND VALUE	
DIAMETER	: 3/4 IN
LENGTH	: 255MM
THREADS	: 10 UNC
MATERIAL	: STAINLESS STEEL 316
SPECIFICATION	: ASTM A193
GRADE	: B8M
ADDITIONAL ITEMS	: C/W 2 HEX NUT ASTM A194-8M

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611341	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: 1-1/8 IN X 6-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 165MM;B7;FKM;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, UNC, SIZE: 1-1/8 IN X 6-1/2 IN	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 FLUOROCARBON COATED, 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	: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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PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900104999	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: 1-3/4-5UNC X 285MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1-3/4 IN, LENGTH 286MM, FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-3/4 IN, LENGTH 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.

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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	9900255277	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 255MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 7/8 IN, LENGTH 10 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL,UNC, GRADE B7, C/W 2 HEAVY HE X NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 255MM, 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	:255MM
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	8138610621	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS, SIZE: 3/8 IN X 4-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 3/8-16UNC X 115MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, UNC, SIZE: 3/8 IN X 4-1/2 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/8 IN, LENGTH 115MM, THREADS 16 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	: 3/8 IN
LENGTH	: 115MM
THREADS	: 16 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	8138611841	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 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 205MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ALL-THREAD, 11 UNC, CS, ASTM A193 - B7, ASTM A194 - 2H, SIZE: 1-1/4 IN X 8 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 205MM, 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	:205MM
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): 8138611841, 9900102691.

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	8138980351	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD: BOLT,CS NUT, SIZE: 7/8 IN X 125	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X125MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: CARBON STEEL AND NUT, A193GR.B7/A, SIZE: 7/8 IN X 125	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 125MM, 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	:125MM
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): 8138610051, 8138980351.

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	8138611501	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT AND NUT: ALL-THREAD	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 190MM;B7;FKM;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: ALL-THREAD, 1-1/4 IN, 7-1/2 IN, UNC, CS, ASTM A193 - B7, ASTM A194 - 2H, FLUORO CARBON COATED	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 190MM, 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	:190MM
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

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	8138611671	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 3/4 IN X 8 IN	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 205MM;B7;FKM;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: ALL-THREAD, SIZE 3/4 IN X 8 IN, CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, 10 UNC, FLUORO CARBON COATED	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 205MM, THREADS 10 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	:3/4 IN
LENGTH	:205MM
THREADS	:10 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

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138612131	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS, SIZE: 3/4 IN X 5-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 145MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, UNC, SIZE: 3/4 IN X 5-3/4 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 145MM, 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	: 145MM
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): 9900234467, 9913056345, 8138612131.

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	9900239138	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 120MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 7/8 IN, LENGTH 4-3/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 7 TPI, GRADE B7, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 120MM, 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	:120MM
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): 9900239138, 9913056557, 8138611281, 8138612151.

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	8138611411	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS, SIZE: 5/8 IN X 8 IN	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X 205MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, UNC, SIZE: 5/8 IN X 8 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 5/8 IN, LENGTH 205MM, 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	:205MM
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): 8138611411, 9900234471.

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102644	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 100MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 7/8 IN, LENGTH 102MM, 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 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  
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	8138611091	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 1-3/8 IN X 9-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-3/8-6UNC X 240MM;B7;FKM;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: ALL-THREAD, SIZE 1-3/8 IN X 9-1/2 IN, CARBON STEEL, ASTM A193-B7, ASTM A194 - 2H, 6 UNC, FLUORO CARBON COATED	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-3/8 IN, LENGTH 240MM, THREADS 6 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH FLUOROCARBON COATED, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-3/8 IN
LENGTH	:240MM
THREADS	:6 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	: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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PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903003150	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: 1-1/4 IN X 7 IN, A193 GR B7	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 180MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN, LENGTH 7 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7,C/W 2 HEAVY H EX NUTS ASTM A194 GR 2H, C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 180MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

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

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

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

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	9900239166	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K62 - Machine Tools	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 1-3/4 IN,	SHORT DESCRIPTION	STUDBOLT: 1-3/4-5UNC X 315MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-3/4 IN, LENGTH 12-1/2 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 1-3/4 IN, LENGTH 315MM, THREADS 5 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-3/4 IN
LENGTH	:315MM
THREADS	:5 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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	9900102614	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 140MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 7/8 IN, LENGTH 143MM, 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

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9913056345	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	BOLT: STUD, 3/4 IN-10 UNC X 5-3/4 IN LG	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 145MM;B7;BLK;NUT
LONG DESCRIPTION	BOLT: STUD, 3/4 IN - 10 UNC X 5-3/4 IN LG, CONTINUOUS B7, COMPLETE WITH 2 HEAVY HEX NUTS	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 145MM, 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	: 145MM
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): 9900234467, 9913056345, 8138612131.

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	9900234439	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIA 1-3/8 IN, LENGTH 10 IN	SHORT DESCRIPTION	STUDBOLT: 1-3/8-6UNC X 255MM;B7M;BLK;NUT
LONG DESCRIPTION	STUD BOLT: FULL THREAD, DIAMETER 1-3/8 IN, LENGTH 10 IN, UNC, MATERIAL CARBON STEEL, SPECIFICATION A193, GRADE B7M, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-3/8 IN, LENGTH 255MM, THREADS 6 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	:1-3/8 IN
LENGTH	:255MM
THREADS	:6 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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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102716	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, 241 MM FULL THR	SHORT DESCRIPTION	STUDBOLT: 1-1/2-6UNC X 240MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1-1/2 IN, LENGTH 241 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 240MM, THREADS 6 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

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

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

Verified By  
Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8186731352	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT AND NUT: ALL-THREAD, 1-1/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 250MM;B7;FKM;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: ALL-THREAD, 1-1/4 IN, 10 IN, UNC, CS, ASTM A193 - B7, ASTM A194 - 2H, FLUORO CARBON COATED	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 FLUOROCARBON COATED, 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	: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  
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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9913056559	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 1-1/2 IN FOR 20 IN LANDING JT	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, FOR 20 IN FLANGE , C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H AND C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/2 IN, LENGTH 260MM, THREADS 6 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH 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.

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102748	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, 64MM FULL THREAD	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 65MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 3/4 IN, LENGTH 64MM, 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 3/4 IN, LENGTH 65MM, 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	: 65MM
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): 8138610131, 9900102748.

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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	9913056159	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,1-1/4 UNCX 1000 MM,A193 GR B7	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 1000MM;B7;BLK;NUT
LONG DESCRIPTION	BOLT: STUD, FULL THREAD, SIZE 1-1/4 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 1-1/4 IN, LENGTH 1000MM, 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	:1000MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102612	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,	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 195MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 3/4 IN, LENGTH 194MM, FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 H EAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 195MM, 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	: 195MM
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):

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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	9900236566	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K62 - Machine Tools	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 1-1/8 IN,	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 160MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/8 IN, LENGTH 6-1/4 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, PITCH DIA. 0.0030 IN TO 0.0040 IN (H8), C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/8 IN, LENGTH 160MM, 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	:160MM
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

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611271	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD: BOLT-NUT 3/4 IN, 4-1/4 IN, UNC, B7	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 110MM;B7;FKM;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: ALL-THREAD, 3/4 IN X 4-1/4 IN, UNC, CS, ASTM A193 GR B7 BOLT, ASTM A194 GR 2H NUT, FLUORO CARBON COATED	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 110MM, THREADS 10 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	:3/4 IN
LENGTH	:110MM
THREADS	:10 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

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138610281	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 8-5/8 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 220MM;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 8-5/8 IN	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 BLACK OXIDE, 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	: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): 8138610281, 9900102624, 9900102694, 8138611981, 9900239154.

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	9900234463	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 3 IN	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 75MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 7/8 IN, LENGTH 3 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 75MM, 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	:75MM
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	8138610391	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 1-1/8 IN, 9 IN, UNC, B7,	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 225MM;B7;FKM;NUT
LONG DESCRIPTION	STUD: BOLT AND NUT ALL-THREAD, 1-1/8 IN, 9 IN, UNC, CS, ASTM A193 - B7, ASTM A194 - 2H, FLUORO CARBON COATED	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/8 IN, LENGTH 225MM, 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	:1-1/8 IN
LENGTH	:225MM
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

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	9900102668	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 IN,	SHORT DESCRIPTION	STUDBOLT: 1-8UNC X 200MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1 IN, LENGTH 197MM, 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 1 IN, LENGTH 200MM, 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	:200MM
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): 9900102668, 9900102617.

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	8138610121	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: 1/2 IN X 2-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1/2-13UNC X 65MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193-B7, ASTM A194-2H, ALL-THREAD, 13 UNC, SIZE: 1/2 IN X 2-1/2 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1/2 IN, LENGTH 65MM, 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	:65MM
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): 8138610121, 9903014990.

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	8138611051	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS, SIZE: 1-3/4 IN X 12 IN	SHORT DESCRIPTION	STUDBOLT: 1-3/4-5UNC X 305MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, UNC, SIZE: 1 IN X 6-1/4 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-3/4 IN, LENGTH 305MM, THREADS 5 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-3/4 IN
LENGTH	:305MM
THREADS	:5 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	: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	8138611901	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS,SIZE 1-3/4 IN X 10-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-3/4-5UNC X 265MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL- THREAD, UNC, SIZE 1-3/4 IN X 10-1/2 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-3/4 IN, LENGTH 265MM, 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	:265MM
THREADS	:5 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

Verified By  
Star Energy Geothermal

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611811	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	SET	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/Ni, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS,THREAD,1-1/4 IN X235MM	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 235MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: CARBON STEEL, FULL THREAD, ASTM A 193 Gr.B7 W/. HEAVY HEX NUTS ASTM A194 Gr.2H, SIZE: 1-1/4 IN X 235MM	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 235MM, 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	:235MM
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): 8138612001, 9900102670, 8138611811.

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	9900245821	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 X 5-1/2 IN,	SHORT DESCRIPTION	STUDBOLT: 1-8UNC X 140MM;B7;CD;NUT
LONG DESCRIPTION	BOLT: STUD, 1 X 5-1/2 IN, ALLOY STEEL, FULL THREAD STEEL;ASTM A-193; GR B7;C/W 2 HEX NUTS ASTM A-194 GR 2 H;CADMIUM PLATED;	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1 IN, LENGTH 140MM, 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	:140MM
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): 9900245821, 9900252823.

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	9900247172	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 150MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 3/4 IN, LENGTH 6 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 3/4 IN, LENGTH 150MM, 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	:150MM
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): 9900212548, 9900247172.

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	9900102681	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 1-1/8 IN,	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 210MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1-1/8 IN, LENGTH 210MM, 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 1-1/8 IN, LENGTH 210MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/8 IN
LENGTH	:210MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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	6232010211	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K62 - Machine Tools	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS,SIZE, 1 IN X 1-1/2 IN LG	SHORT DESCRIPTION	STUDBOLT: 1-8UNC X 40MM;B7;BLK
LONG DESCRIPTION	STUD BOLT: CARBON STEEL, ASTM A193, B7, ALL-THREAD, UNC, SIZE, 1 IN X 1- 1/2 IN LG	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1 IN, LENGTH 40MM, THREADS 8 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE

CHARACTERISTIC AND VALUE	
DIAMETER	:1 IN
LENGTH	:40MM
THREADS	:8 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900255275	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 120MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 5/8 IN, LENGTH 4-3/4 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 5/8 IN, LENGTH 120MM, 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	:120MM
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

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138610401	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: CARBON STEEL 1-3/8IN X 11IN	SHORT DESCRIPTION	STUDBOLT: 1-3/8-6UNC X 280MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: CARBON STEEL, ALL-THREAD, 7 UNC, ASTM A193 - B7, ASTM A194 - 2H, SIZE: 1-3/8 IN X 11 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-3/8 IN, LENGTH 280MM, 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	:280MM
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): 9900234714, 8138611131, 8138610401.

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	9900102680	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 1-1/8 IN,	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 180MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1-1/8 IN, LENGTH 178MM, 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 1-1/8 IN, LENGTH 180MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/8 IN
LENGTH	:180MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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	9900245833	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: 1-7/8 X 13-1/2 IN FULL THREAD	SHORT DESCRIPTION	STUDBOLT: 1-7/8-8UN X 345MM;B7;CD
LONG DESCRIPTION	STUD BOLT: SIZE 1-7/8 X 13-1/2 IN, FULL THREAD MATERIAL ALLOY STEEL ASTM-A193 GR. B7, THREAD TYPE UNC, TPI 8, FINISH CADMIUM PLATED ASTM- B696	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-7/8 IN, LENGTH 345MM, THREADS 8 UN, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696

CHARACTERISTIC AND VALUE	
DIAMETER	:1-7/8 IN
LENGTH	:345MM
THREADS	:8 UN
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102699	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 270MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1-1/4 IN, LENGTH 270MM, 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 270MM, 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	:270MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By  
PT. Sinergi Solusi Teknik

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900247226	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/Ni, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN,	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 230MM;B7M;ZP;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN, LENGTH 9 IN FULL THREAD, SPECIFICATION A193, GR B7M, MATERIAL ZINC PLATED, GRADE B7M, 8 UN, C/W 2 HEAV Y HEX NUTS ASTM A194 GR 2HM	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 230MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7M, FINISH ZINC PLATED, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2HM

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/4 IN
LENGTH	:230MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7M
FINISH	:ZINC PLATED
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2HM

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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	9900102616	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 IN,	SHORT DESCRIPTION	STUDBOLT: 1-8UNC X 195MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1 IN, LENGTH 194MM, 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 1 IN, LENGTH 195MM, 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	:195MM
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

(.....)

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# MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102640	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,	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 230MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 3/4 IN, LENGTH 229 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 230MM, 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	: 230MM
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): 9900234459, 9900102640.

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	9900102651	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 165MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 7/8 IN, LENGTH 165MM, 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 165MM, 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	:165MM
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): 9900102651, 8138610861, 8138612181.

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	9900102658	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 IN,	SHORT DESCRIPTION	STUDBOLT: 1-8UNC X 165MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1 IN, LENGTH 165 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 165MM, 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	:165MM
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): 9900102663, 9900234446, 9900102658.

Prepared By  
PT. Sinergi Solusi Teknik

Verified By  
Star Energy Geothermal

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