

MATERIAL CATALOGING REPORT - APPROVAL SHEET

DATE: 05-Aug-2022

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903072718	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: ALL-THREAD,GR B7 COATED ZINC	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 380MM;B7;ZP;NUT
LONG DESCRIPTION	STUD BOLT: ALL-THREAD,GR B7 COATED ZINC PLATE,GRADE B7 SPECIFICATION ASTM A193,LENGTH 15 IN,TYPE FULL THREAD,MATERIAL CS,DIAMETER 1- 1/8 IN,THREADS 8 TPI,C/W 2 HVY HEX NUTS ASTM A194 GR 2H,BOLT: STUD, 1- 1/8 IN DIA X 15 IN LENGTH FULL THREAD, MATERIAL CARBON STEEL, SPECIFICATION ASTM-A193 GR. B7, UNC, 8 TPI, C/W 2 EA HEX. NUTS ASTM-A194 GR. 2H AND MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/8 IN, LENGTH 380MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH ZINC PLATED, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/8 IN
LENGTH	:380MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:ZINC PLATED
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

Prepared By
PT. Sinergi Solusi Teknik

Verified By
Star Energy Geothermal

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903003144	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 X 9 IN, A193 GR B7	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 230MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN, LENGTH 9 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7,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 230MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

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

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PHYSICAL INSPECTION RESULT:

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

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PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138610681	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 1-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 40MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, 13 UNC, SIZE: 3/4 IN X 1-1/2 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 40MM, 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	: 40MM
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	9900234446	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 IN, LE 6-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-8UNC X 165MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT:DIAMETER 1 IN, LENGTH 6-1/2 IN FULL THREAD, SPECIFICATION A193, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 HEAV Y 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.

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MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900212548	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 6 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 AND 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.

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234447	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 6-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-8UNC X 170MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1 IN, LENGTH 6-3/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H AND C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1 IN, LENGTH 170MM, 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	:170MM
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): 8138980701, 9900234447.

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234453	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 6 IN	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 150MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 7/8 IN, LENGTH 6 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H AND C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 150MM, THREADS 9 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

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

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

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

Prepared By
PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900236568	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 7-1/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 185MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/8 IN, LENGTH 7-1/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, CADMIUM OR ZINC PLATED, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H	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 CADMIUM PLATED ASTM B696, 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	:CADMIUM PLATED ASTM B696
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

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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	8138980851	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 70	SHORT DESCRIPTION	STUDBOLT: 1/2-13UNC X 70MM;B7;BLK;NUT+FW
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, WITH 2 WASHER A193GR.B7/A, SIZE: 1/2 IN X 70	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1/2 IN, LENGTH 70MM, THREADS 13 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H, C/W 2 FLAT WASHER ASTM F436

CHARACTERISTIC AND VALUE	
DIAMETER	:1/2 IN
LENGTH	:70MM
THREADS	:13 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 FLAT WASHER
ASTM F436	
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

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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	9900102662	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: 7/8-9UNC X 65MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 7/8 IN, LENGTH 153MM, FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 H EAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 65MM, 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	:65MM
THREADS	:9 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611151	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CROME, SIZE: 1-5/8 IN X 11 IN	SHORT DESCRIPTION	STUDBOLT: 1-5/8-8UN X 280MM;B7;CP;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CROME, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, UNC, SIZE: 1-5/8 IN X 11 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-5/8 IN, LENGTH 280MM, THREADS 8 UN, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CHROME PLATED, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-5/8 IN
LENGTH	:280MM
THREADS	:8 UN
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CHROME PLATED
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102726	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;ZP;NUT
LONG DESCRIPTION	STUD BOLT: UNC 7/8 IN, LENGTH 140 MM, FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 140MM, THREADS 9 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH ZINC PLATED, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:7/8 IN
LENGTH	:140MM
THREADS	:9 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:ZINC PLATED
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102728	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 1/4 IN,	SHORT DESCRIPTION	STUDBOLT: 1/4-20UNC X 90MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1/4 IN, LENGTH 89mm 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 1/4 IN, LENGTH 90MM, THREADS 20 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	:1/4 IN
LENGTH	:90MM
THREADS	:20 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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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903008853	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: 1-1/8 IN X 5-3/4 IN, A193 B7	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 145MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/8 IN, LENGTH 5-3/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL 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 1-1/8 IN, LENGTH 145MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/8 IN
LENGTH	:145MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900212568, 9903008853.

Prepared By
PT. Sinergi Solusi Teknik

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Star Energy Geothermal

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138610761	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 IN	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X125MM;B7;BLK;NUT
LONG DESCRIPTION	STUD: BOLT, CARBON STEEL, ALL-THREAD, 10 UNC, ASTM A193 - B7, ASTM A194 - 2H, SIZE: 3/4 IN X 4 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 125MM, THREADS 10 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

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

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

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

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PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900252823	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 IN,	SHORT DESCRIPTION	STUDBOLT: 1-8UNC X 140MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1 IN, LENGTH 5-1/2 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7,CADMIUM PLATE D ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1 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.

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900212586	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	14 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B8, METRIC
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 1/2 IN, LENGTH 3 IN	SHORT DESCRIPTION	STUDBOLT: 1/2-13UNC X 75MM;B8;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1/2 IN, LENGTH 3 IN FULL THREAD, MATERIAL STAINLESS STEEL 304, UNC, 13 TPI, C/W 2 HEAVY HEX NUTS, [PMI (POSITIVE MATERIAL IDENTIFICATION) WILL BE CONDUCTED BY STAR ENERGY WAREHOUSE]	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1/2 IN, LENGTH 75MM, THREADS 13 UNC, MATERIAL STAINLESS STEEL 304, SPECIFICATION ASTM A193, GRADE B8, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-8

CHARACTERISTIC AND VALUE	
DIAMETER	:1/2 IN
LENGTH	:75MM
THREADS	:13 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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PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903014989	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 1-5/8 IN,	SHORT DESCRIPTION	STUDBOLT: 1-5/8-8UN X 355MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1-5/8 IN, LENGTH 356MM, 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 1-5/8 IN, LENGTH 355MM, THREADS 8 UN, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-5/8 IN
LENGTH	:355MM
THREADS	:8 UN
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9913055963	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K76 - Fittings and Flanges	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	14 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B8, METRIC
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT : DIAMETER 1 IN	SHORT DESCRIPTION	STUDBOLT: 1-8UNC X 160MM;B8;NUT
LONG DESCRIPTION	STUD BOLT : DIAMETER 1 IN X LENGTH 6-1/4 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 1 IN, LENGTH 160MM, THREADS 8 UNC, MATERIAL STAINLESS STEEL 304, SPECIFICATION ASTM A193, GRADE B8, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-8

CHARACTERISTIC AND VALUE	
DIAMETER	:1 IN
LENGTH	:160MM
THREADS	:8 UNC
MATERIAL	:STAINLESS STEEL 304
SPECIFICATION	:ASTM A193
GRADE	:B8
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-8

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900212531	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: 5/8 X 4 IN, FULL THREAD	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X 100MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: 5/8 X 4 IN, FULL THREAD, MATERIAL ALLOY STEEL ASTM-A193 GR. B7, THREAD TYPE: UNC, TPI : 11, FINISH: CADMIUM PLATED ASTM-B 696, ADP, COMPLETE WITH 2 EA HEX. NUTS ASTM-A194 GR. 2H, COMPLETE WITH MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 5/8 IN, LENGTH 100MM, THREADS 11 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

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

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

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

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PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138610131	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 1-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 65MM;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 1-1/2 IN	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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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900239140	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 1-1/2 IN,	SHORT DESCRIPTION	STUDBOLT: 1-1/2-6UNC X 255MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/2 IN, LENGTH 10 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 7 TPI, GRADE B7,CADMI UM PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H,C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/2 IN, LENGTH 255MM, THREADS 6 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/2 IN
LENGTH	:255MM
THREADS	:6 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	: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): 9900236582, 9900239140.

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611131	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS, SIZE: 1-3/8 IN X 11 IN	SHORT DESCRIPTION	STUDBOLT: 1-3/8-6UNC X 280MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, UNC, SIZE: 1-3/8 IN X 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.

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9913056145	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, M20 X 1000 MM, A193 GR B7	SHORT DESCRIPTION	STUDBOLT: M20-2.50 X 1000MM;B7;BLK;NUT
LONG DESCRIPTION	BOLT: STUD, FULL THREAD, SIZE M20 LENGTH 1000 MM, MATERIAL A193 GR B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER M20, LENGTH 1000MM, THREADS 2.5MM, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:M20
LENGTH	:1000MM
THREADS	:2.5MM
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900236561	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIA 5/8 IN, LENGTH 4-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X 115MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 5/8 IN, LENGTH 4-1/2 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 11 TPI, GRADE B7, C/ W 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 5/8 IN, LENGTH 115MM, 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	:115MM
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): 9900102629, 9900236561.

Prepared By
PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102702	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 330MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1-1/4 IN, LENGTH 330MM, 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 330MM, 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	:330MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138610141	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 3 IN	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 75MM;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 3 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 75MM, THREADS 10 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	: 3/4 IN
LENGTH	: 75MM
THREADS	: 10 UNC
MATERIAL	: ALLOY STEEL
SPECIFICATION	: ASTM A193
GRADE	: B7
FINISH	: BLACK OXIDE
ADDITIONAL ITEMS	: C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900234477, 8138610141.

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900236582	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 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/2-6UNC X 255MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/2 IN, LENGTH 10 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 6 TPI, GRADE B7,CADMI UM PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, PITCH DIA. 0.0030 IN TO 0.0040 IN (H8), C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/2 IN, LENGTH 255MM, 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	:255MM
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): 9900236582, 9900239140.

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900255276	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 170MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 7/8 IN, LENGTH 6-3/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, C/W 2 HEAV Y HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 170MM, 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	:170MM
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): 9900255276, 9900102652.

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611751	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 5 IN	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X125MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: CARBON STEEL, ASTM A193 - B7, A, FLUORO CARBON COATING	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 5/8 IN, LENGTH 125MM, 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	:125MM
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): 9900102735, 8138611751.

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138612261	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: 1/2-13UNC X 70MM;B7;FKM;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: ALL-THREAD, 1/2 IN, 2-3/4 IN, UNC, CS, ASTM A193 - B7, ASTM A194 - 2H, FLUORO CARBON COATED	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1/2 IN, LENGTH 70MM, THREADS 13 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH FLUOROCARBON COATED, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

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

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138980121	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 8-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 215MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, 7 UNC, SIZE: 3/4 IN X 8-1/2 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 215MM, 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	: 215MM
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): 8138980121, 9900103994.

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138610421	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 11-1/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 285MM;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 11-1/4 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/8 IN, LENGTH 285MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/8 IN
LENGTH	:285MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138110041	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: SIZE 1-5/8 IN X 12 IN, CS	SHORT DESCRIPTION	STUDBOLT: 1-5/8-12UN X 305MM;B7;FKM;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: ALL-THREAD, SIZE 1-5/8 IN X 12 IN, CARBON STEEL, ASTM A193-B7, ASTM A194-2H, 12 UNC, FLUORO CARBON COATED	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-5/8 IN, LENGTH 305MM, THREADS 12 UN, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH FLUOROCARBON COATED, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-5/8 IN
LENGTH	:305MM
THREADS	:12 UN
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	: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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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611991	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 9 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 230MM;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 9 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 230MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

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

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

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

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900239154	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 220MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN, LENGTH 8-3/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 7 TPI, GRADE B7, C /W 2 HEAVY HEX NUTS ASTM A194 GR 2H AND C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 220MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH 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.

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900245829	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	BOLT: STUD, 1-3/8 X 8-3/4 IN,	SHORT DESCRIPTION	STUDBOLT: 1-3/8-6UNC X 220MM;B7;CD
LONG DESCRIPTION	BOLT: STUD, 1-3/8 X 8-3/4 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 1-3/8 IN, LENGTH 220MM, THREADS 6 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696

CHARACTERISTIC AND VALUE	
DIAMETER	:1-3/8 IN
LENGTH	:220MM
THREADS	:6 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903051852	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K62 - Machine Tools	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	BOLT: STUD TYPE N/A, GR B7	SHORT DESCRIPTION	STUDBOLT: 2IN-4.5UNC X 430MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: TYPE N/A GR B7 C/W 2 HEAVY HEX NUTS A 194 DIAMETER 2 IN,LENGTH 430 MM,SPECIFICATION A193-B7,THREAD LENGTH 2 IN,MATERIALC S,GRADE B7,B18.2.1 STUD BOLT W/2 B18.2.2 HEAVY HEX NUTS, UNC B1.1	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 2 IN, LENGTH 430MM, THREADS 4.5 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:2 IN
LENGTH	:430MM
THREADS	:4.5 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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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	9900236579	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 14 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 355MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN, LENGTH 14 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 7 TPI, GRADE B7,CADMI UM PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, PITCH DIA. 0.0030 IN TO 0.0040 IN (H8), C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 355MM, 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	:355MM
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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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611281	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.

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PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138612251	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: 2 IN X 15-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 2IN-4.5UNC X 395MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, 6 UNC, SIZE: 2 IN X 15-1/2 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 2 IN, LENGTH 395MM, THREADS 4.5 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	: 2 IN
LENGTH	: 395MM
THREADS	: 4.5 UNC
MATERIAL	: ALLOY STEEL
SPECIFICATION	: ASTM A193
GRADE	: B7
FINISH	: BLACK OXIDE
ADDITIONAL ITEMS	: C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138610531	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: 1-1/2-6UNC X 215MM;B7;FKM;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: ALL-THREAD, 1-1/2 IN, 8-1/2 IN, UNC, CS, ASTM A193 - B7, ASTM A194 - 2H, FLUORO CARBON COATED	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/2 IN, LENGTH 215MM, 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	:1-1/2 IN
LENGTH	:215MM
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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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234717	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIA 5/8 IN, LENGTH 3-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X 95MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 5/8 IN, LENGTH 3-3/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 11 TPI, GRADE B7, CA DMIUM PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 5/8 IN, LENGTH 95MM, THREADS 11 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:5/8 IN
LENGTH	:95MM
THREADS	:11 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900236572	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIA 1-1/8 IN, LENGTH 10-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 265MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/8 IN, LENGTH 10-1/2 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 7 TPI, GRADE B7, CADMIUM PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/8 IN, LENGTH 265MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE 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	:265MM
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): 9900236572, 9900239158.

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MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138612271	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, 1-3/4 IN, 11-1/4 IN, UNC	SHORT DESCRIPTION	STUDBOLT: 1-3/4-5UNC X 285MM;B7;FKM;NUT
LONG DESCRIPTION	STUD: BOLT AND NUT, ALL-THREAD, 1-3/4 IN, 11-1/4 IN, UNC, CS, ASTM A193 - B7, ASTM A194 - 2H, FLUORO CARBON COATED	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-3/4 IN, LENGTH 285MM, THREADS 5 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH FLUOROCARBON COATED, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-3/4 IN
LENGTH	:285MM
THREADS	:5 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:FLUOROCARBON COATED
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

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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	9900218721	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 1-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/2-6UNC X 290MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/2 IN, LENGTH 11-1/2 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, C/W 2 H EAVY HEX NUTS ASTM A194 GR 2H AND C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/2 IN, LENGTH 290MM, 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	:290MM
THREADS	:6 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138612181	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS, SIZE: 7/8 IN X 6-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 165MM;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 6-1/2 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 165MM, THREADS 9 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH 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.

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PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102618	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 335MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1 IN, LENGTH 334 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 335MM, 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	:335MM
THREADS	:8 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234716	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIA 5/8 IN, LENGTH 3-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X 90MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 5/8 IN, LENGTH 3-1/2 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL,UNC, GRADE B7, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 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.

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900239153	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: DIA 1-1/4 IN, LE 8-1/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 210MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/4 IN, LENGTH 8-1/4 IN FULL THREAD, SPECIFICATION A193, MATERIAL CARBON STEEL, UNC, GRADE B7, C/W 2 HEAVY HE X NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 210MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

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

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

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

Prepared By
PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903014967	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, LENGTH 251 MM, A193	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 250MM;B7;BLK;NUT
LONG DESCRIPTION	BOLT: STUD, UNC 1-1/4 IN, LENGTH 251MM, 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 250MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

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

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

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

Prepared By
PT. Sinergi Solusi Teknik

Verified By
Star Energy Geothermal

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MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138980651	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD: BOLT,CS,SIZE: 1-3/8 IN X 10-1/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-3/8-6UNC X 260MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: CARBON STEEL AND NUT, ALL-THREAD, 6 UNC, ASTM A193 - B7 , ASTM A 194 - 2H, SIZE: 1-3/8 IN X 10-1/4 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-3/8 IN, LENGTH 260MM, THREADS 6 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

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

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

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

Prepared By
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	8103110101	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS, SIZE: 1-1/2 IN X 8-1/8 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/2-6UNC X 205MM;B7;FKM
LONG DESCRIPTION	STUD BOLT: 6 UNC, ASTM A193-B7, ALL-THREAD, SIZE: 1-1/2 IN X 8-1/8 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/2 IN, LENGTH 205MM, THREADS 6 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH FLUOROCARBON COATED

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/2 IN
LENGTH	:205MM
THREADS	:6 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:FLUOROCARBON COATED

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102625	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 225MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1-1/4 IN, LENGTH 226MM, 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 225MM, 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	:225MM
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	9903031899	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 1-5/8 IN,	SHORT DESCRIPTION	STUDBOLT: 1-5/8-8UN X 470MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1-5/8 IN, LENGTH 470MM, 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 1-5/8 IN, LENGTH 470MM, THREADS 8 UN, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-5/8 IN
LENGTH	:470MM
THREADS	:8 UN
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903008852	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 IN X 5-1/4 IN, A193 GR.B7	SHORT DESCRIPTION	STUDBOLT: 1-8UNC X 135MM;B8;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1 IN, LENGTH 5-1/4 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 IN, LENGTH 135MM, THREADS 8 UNC, MATERIAL STAINLESS STEEL 304, SPECIFICATION ASTM A193, GRADE B8, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-8

CHARACTERISTIC AND VALUE	
DIAMETER	:1 IN
LENGTH	:135MM
THREADS	:8 UNC
MATERIAL	:STAINLESS STEEL 304
SPECIFICATION	:ASTM A193
GRADE	:B8
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-8

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102646	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 135MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 7/8 IN, LENGTH 134MM, 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 135MM, 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	:135MM
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): 9900102646, 8138610821.

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	9900255274	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIA 1/2 IN, 4 IN FULL THREAD	SHORT DESCRIPTION	STUDBOLT: 1/2-13UNC X 100MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1/2 IN, LENGTH 4 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 1/2 IN, LENGTH 100MM, 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	:100MM
THREADS	:13 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900236559	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: DIA 3/4 IN, LENGTH 4-1/4 IN	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 110MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT, DIAMETER 3/4 IN, LENGTH 4-1/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, CADMIUM OR ZINC PLATED, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H AND MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 110MM, THREADS 10 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:3/4 IN
LENGTH	:110MM
THREADS	:10 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900212536, 9900236559.

Prepared By
PT. Sinergi Solusi Teknik

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Star Energy Geothermal

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MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611061	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS, SIZE: 1-1/2 IN X 11 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/2-6UNC X 280MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, UNC, SIZE: 1-1/2 IN X 11 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/2 IN, LENGTH 280MM, THREADS 6 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/2 IN
LENGTH	:280MM
THREADS	:6 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	: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	9900102620	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, LENGTH 175 MM	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 175MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1-1/8 IN, LENGTH 175 MM, FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H, DELIVERY COMPLETE WITH MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/8 IN, LENGTH 175MM, 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	:175MM
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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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9913056150	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, 1/4 UNC X 1000 MM, A193 GR B7	SHORT DESCRIPTION	STUDBOLT: 1/4-20UNC X 1000MM;B7;BLK;NUT
LONG DESCRIPTION	BOLT: STUD, FULL THREAD, SIZE 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 1/4 IN, LENGTH 1000MM, THREADS 20 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	: 1/4 IN
LENGTH	: 1000MM
THREADS	: 20 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	8138611011	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 7-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 190MM;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 7-1/2 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/8 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	:1-1/8 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):

Prepared By
PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138980201	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 9-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 240MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: CARBON STEEL AND NUT, ALL-THREAD, 7 UNC, ASTM A193 - B7 , ASTM A 194 - 2H, SIZE: 1-1/4 IN X 9-1/2 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 240MM, THREADS 7 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/4 IN
LENGTH	:240MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 8138980201, 9903000303, 9900102695.

Prepared By
PT. Sinergi Solusi Teknik

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Star Energy Geothermal

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138610081	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

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

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

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

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

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PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900212532	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 5/8 IN, LENGTH 5 IN	SHORT DESCRIPTION	STUDBOLT: 5/8-11UNC X125MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 5/8 IN, LENGTH 5 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 11 TPI, GRADE B7, CADMIUM PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, PITCH DIA. 0.0020 IN TO 0.0025 IN (H5), C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 5/8 IN, LENGTH 125MM, THREADS 11 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:5/8 IN
LENGTH	:125MM
THREADS	:11 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102669	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 205MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: UNC 1 IN, LENGTH 203MM, 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 205MM, 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	:205MM
THREADS	:8 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234437	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIA 1-3/8 IN, LENGTH 9-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 1-3/8-6UNC X 240MM;B7M;BLK;NUT
LONG DESCRIPTION	STUD BOLT: FULL THREAD, DIAMETER 1-3/8 IN, LENGTH 9-1/2 IN, UNC, MATERIAL CARBON STEEL, SPECIFICATION A193, GRADE B7M, C/W 2 HEAVY H EX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-3/8 IN, LENGTH 240MM, 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	:240MM
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):

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MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903019682	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 190MM;B8M;NUT
LONG DESCRIPTION	STUD BOLT: UNC 3/4 IN, LENGTH 191MM, 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 190MM, 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	: 190MM
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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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9913057348	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K04 - Casing, Tubing	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: UNC 1-3/8 IN, LENGTH 10-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-3/8-6UNC X 275MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: ALL-THREAD, 1-3/8 IN, 10-3/4 IN, FULL THREAD, CARBON STEEL, A193, B7, COMPLETE WITH 2HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-3/8 IN, LENGTH 275MM, 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	:275MM
THREADS	:6 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9913056161	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 UNC X 1000 MM,A193 GR B7	SHORT DESCRIPTION	STUDBOLT: 1-1/2-6UNC X 1000MM;B7;BLK;NUT
LONG DESCRIPTION	BOLT: STUD, FULL THREAD, SIZE 1-1/2 IN UNC LENGTH 1000 MM, MATERIAL A193 GR B7, COMPLETE WITH 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/2 IN, LENGTH 1000MM, THREADS 6 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

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

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9913055962	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K76 - Fittings and Flanges	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	14 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B8, METRIC
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT : DIAMETER 7/8 IN	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 140MM;B8;NUT
LONG DESCRIPTION	STUD BOLT : DIAMETER 7/8 IN X LENGTH 5-1/2 IN, FULL THREAD, MATERIAL A193 GR.B8, UNC, C/W 2 HEAVY HEX. NUTS A194 GR.8 SS 304, [PMI (POSITIVE MATERIAL IDENTIFICATION) WILL BE CONDUCTED BY STAR ENERGY WAREHOUSE]	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 140MM, THREADS 9 UNC, MATERIAL STAINLESS STEEL 304, SPECIFICATION ASTM A193, GRADE B8, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-8

CHARACTERISTIC AND VALUE	
DIAMETER	:7/8 IN
LENGTH	:140MM
THREADS	:9 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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PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611121	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 6-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 170MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, UNC, SIZE: 1-1/8 IN X 6-3/4 IN	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 BLACK OXIDE, 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	: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	9900212590	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	35 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B8M CL 2, UNC, >495MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 3/4 IN, LENGTH 5 IN	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X125MM;B8M;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 3/4 IN, LENGTH 5 IN FULL THREAD, SPECIFICATION A193, GR B8M, MATERIAL STAINLESS STEEL 304, UNC, 10 TPI, GRADE B8 M, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 125MM, THREADS 10 UNC, MATERIAL STAINLESS STEEL 316, SPECIFICATION ASTM A193, GRADE B8M, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-8

CHARACTERISTIC AND VALUE	
DIAMETER	: 3/4 IN
LENGTH	: 125MM
THREADS	: 10 UNC
MATERIAL	: STAINLESS STEEL 316
SPECIFICATION	: ASTM A193
GRADE	: B8M
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	9900234442	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 7 IN	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 180MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 7/8 IN, LENGTH 7 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, C/W 2 HEAVY HE X NUTS ASTM A194 GR 2H AND C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 7/8 IN, LENGTH 180MM, 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	:180MM
THREADS	:9 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234483	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/Ni, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 1/2 IN, LENGTH 3 IN	SHORT DESCRIPTION	STUDBOLT: 1/2-13UNC X 75MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1/2 IN, LENGTH 3 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H AND C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1/2 IN, LENGTH 75MM, 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	:75MM
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): 9900102607, 9900234483.

Prepared By
PT. Sinergi Solusi Teknik

Verified By
Star Energy Geothermal

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	6232010231	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 2 IN LG	SHORT DESCRIPTION	STUDBOLT: 1-8UNC X 50MM;B7;CP
LONG DESCRIPTION	STUD BOLT: CARBON STEEL, ASTM A193, B7, ALL-THREAD, UNC, SIZE, 1 IN X 2 IN LG	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1 IN, LENGTH 50MM, THREADS 8 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CHROME PLATED

CHARACTERISTIC AND VALUE	
DIAMETER	:1 IN
LENGTH	:50MM
THREADS	:8 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CHROME PLATED

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 6232010231, 6232010251.

Prepared By
PT. Sinergi Solusi Teknik

Verified By
Star Energy Geothermal

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234418	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K62 - Machine Tools	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	BOLT: STUD, DIA 1-1/2 IN, LE 6-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/2-6UNC X 170MM;B7;BLK;NUT
LONG DESCRIPTION	BOLT: STUD, DIAMETER 1-1/2 IN, LENGTH 6-3/4 IN FULL THREAD, SPECIFICATION A193, MATERIAL CARBON STEEL, UNC, GRADE B7, C/W 2 HEAVY H EX NUTS ASTM A194 GR 2H AND C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/2 IN, LENGTH 170MM, 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	:170MM
THREADS	:6 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900252822	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 7/8 IN,	SHORT DESCRIPTION	STUDBOLT: 7/8-9UNC X 145MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 7/8 IN, LENGTH 5-3/4 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 7/8 IN, LENGTH 145MM, 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	:145MM
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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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900245822	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

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

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

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 9900234445, 9900239171, 9900245822, 9900104673, 8138611041.

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PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900239165	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, 7IN	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 180MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/8 IN, LENGTH 7 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 7 TPI, GRADE B7, CADMI UM OR ZINC PLATED, C/W 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 CADMIUM PLATED ASTM B696, 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	:CADMIUM PLATED ASTM B696
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900245827	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, 1-1/8 X 7 IN FULL	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 180MM;B7;CD
LONG DESCRIPTION	BOLT: STUD, 1-1/8 X 7 IN FULL THREAD MATERIAL : ALLOY STEEL ASTM-A193 GR. B7THREAD TYPE : UNC; TPI : 8;FINISH : CADMIUM PLATED ASTM- B696;	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 CADMIUM PLATED ASTM B696

CHARACTERISTIC AND VALUE	
DIAMETER	:1-1/8 IN
LENGTH	:180MM
THREADS	:7 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:CADMIUM PLATED ASTM B696

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903008854	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: 1-1/8 IN X 6 IN, A193 GR.B7	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 150MM;B8;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/8 IN, LENGTH 6 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 1-1/8 IN, LENGTH 150MM, 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	:1-1/8 IN
LENGTH	:150MM
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):

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9903001287	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 3/4IN X 4-1/4IN,A193	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 110MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 3/4 IN, LENGTH 4-1/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL,UNC, GRADE B7, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 110MM, THREADS 10 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

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

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

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

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PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	6232010071	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K62 - Machine Tools	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/Ni, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: CS, 1/2 IN X 3-3/8 IN LG	SHORT DESCRIPTION	STUDBOLT: 1/2-13UNC X 85MM;B7;FKM
LONG DESCRIPTION	STUD BOLT: CARBON STEEL, ASTM A193, B7, ALL-THREAD, UNC, SIZE: 1/2 IN X 3-3/8 IN LG	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1/2 IN, LENGTH 85MM, THREADS 13 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH FLUOROCARBON COATED

CHARACTERISTIC AND VALUE	
DIAMETER	:1/2 IN
LENGTH	:85MM
THREADS	:13 UNC
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:FLUOROCARBON COATED

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900236576	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K62 - Machine Tools	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	BOLT: STUD, DIA 1-1/4 IN, LE 7-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 195MM;B7;BLK;NUT
LONG DESCRIPTION	BOLT: STUD, DIAMETER 1-1/4 IN, LENGTH 7-3/4 IN FULL THREAD, SPECIFICATION A193, MATERIAL CARBON STEEL, UNC, GRADE B7, C/W 2 HEAVY HE X NUTS ASTM A194 GR 2H, C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 195MM, 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	:195MM
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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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234718	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 100MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 5/8 IN, LENGTH 4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7,CADMIUM OR ZINC PLATED ASTM-B696, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, PITCH DIA. 0.0020 IN TO 0.0025 IN (H5), C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 5/8 IN, LENGTH 100MM, THREADS 11 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CADMIUM PLATED ASTM B696, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

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

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

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

Prepared By
PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138980111	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

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

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

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

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

Prepared By
PT. Sinergi Solusi Teknik

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611801	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 5-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/4-7UNC X 145MM;B7;FKM;NUT
LONG DESCRIPTION	STUD BOLT AND NUT: CARBON STEEL, ASTM A193 - B7, ASTM A194 - 2H, ALL-THREAD, UNC, SIZE: 1-1/4 IN X 5-3/4 IN	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-1/4 IN, LENGTH 145MM, 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	:145MM
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):

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	8138611081	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

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

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

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PHYSICAL INSPECTION RESULT:

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

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611721	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

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

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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900234424	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 12-5/8 IN	SHORT DESCRIPTION	STUDBOLT: 1-5/8-8UN X 320MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-5/8 IN, LENGTH 12-5/8 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, C/W 2 H EAVY HEX NUTS ASTM A194 GR 2H AND C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 1-5/8 IN, LENGTH 320MM, THREADS 8 UN, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	:1-5/8 IN
LENGTH	:320MM
THREADS	:8 UN
MATERIAL	:ALLOY STEEL
SPECIFICATION	:ASTM A193
GRADE	:B7
FINISH	:BLACK OXIDE
ADDITIONAL ITEMS	:C/W 2 HEX NUT ASTM A194-2H

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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611521	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD: BOLT,CROME,SIZE:1-3/8 INX10-1/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-3/8-6UNC X 260MM;B7;CP;NUT
LONG DESCRIPTION	STUD: BOLT, CROME AND NUT, ALL-THREAD, 6 UNC, CS, ASTM A193-B7, ASTM A194 - 2H, SIZE: 1-3/8 IN X 10-1/4 IN	LONG DESCRIPTION	STUD-BOLT: ALL- THREAD, DIAMETER 1- 3/8 IN, LENGTH 260MM, THREADS 6 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH CHROME PLATED, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

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

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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900102650	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

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

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

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

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

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900239172	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/NI, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIAMETER 2 IN,	SHORT DESCRIPTION	STUDBOLT: 2IN-4.5UNC X 335MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 2 IN, LENGTH 13-1/4 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, 7 TPI, GRADE B7, C/W 2 HEAVY HEX NUTS ASTM A194 GR 2H, C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 2 IN, LENGTH 335MM, THREADS 4.5 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

CHARACTERISTIC AND VALUE	
DIAMETER	: 2 IN
LENGTH	: 335MM
THREADS	: 4.5 UNC
MATERIAL	: ALLOY STEEL
SPECIFICATION	: ASTM A193
GRADE	: B7
FINISH	: BLACK OXIDE
ADDITIONAL ITEMS	: C/W 2 HEX NUT ASTM A194-2H

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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611741	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, 7 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, C/W 2 FLAT WASHER ASTM F436

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
ADDITIONAL ITEMS	:C/W 2 FLAT WASHER ASTM F436

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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S):

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	9900236569	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: DIA 1-1/8 IN, LENGTH 7-3/4 IN	SHORT DESCRIPTION	STUDBOLT: 1-1/8-7UNC X 195MM;B7;CD;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 1-1/8 IN, LENGTH 7-3/4 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 195MM, 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	:195MM
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

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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	9913056153	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, 7/16 UNC X 1000 MM, A193 GR B7	SHORT DESCRIPTION	STUDBOLT: 7/16-14UNC X 1000MM;B7;BLK;NUT
LONG DESCRIPTION	BOLT: STUD, FULL THREAD, SIZE 7/16 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 7/16 IN, LENGTH 1000MM, THREADS 14 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	: 7/16 IN
LENGTH	: 1000MM
THREADS	: 14 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): 9913056151, 9913056153.

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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	9900234469	MATERIAL NUMBER	
NOUN	-	NOUN	STUD-BOLT
MODIFIER	-	MODIFIER	ALL-THREAD
MAIN CHARACTERISTIC		MESC GROUP	81 - FASTENERS, ETC.
MATERIAL GROUP	K81 - Fasteners, Etc.	MESC SUB GROUP	38 - STUD BOLTS, ALLOY STEEL
BASE UOM	EA	MESC SUB SUB GROUP	03 - STUD BOLTS, ALLOY STEEL, ASTM A193 GR B7 +ZN/Ni, <500MM
		Material Group	K81 - Fasteners, Etc.
		BASE UOM	EA - each

SHORT DESCRIPTION	STUD BOLT: DIA 3/4 IN, LENGTH 6-1/2 IN	SHORT DESCRIPTION	STUDBOLT: 3/4-10UNC X 165MM;B7;BLK;NUT
LONG DESCRIPTION	STUD BOLT: DIAMETER 3/4 IN, LENGTH 6-1/2 IN FULL THREAD, SPECIFICATION A193, GR B7, MATERIAL CARBON STEEL, UNC, GRADE B7, C/W 2 HEAV Y HEX NUTS ASTM A194 GR 2H AND C/W MILL CERTIFICATE	LONG DESCRIPTION	STUD-BOLT: ALL-THREAD, DIAMETER 3/4 IN, LENGTH 165MM, THREADS 10 UNC, MATERIAL ALLOY STEEL, SPECIFICATION ASTM A193, GRADE B7, FINISH BLACK OXIDE, ADDITIONAL ITEMS C/W 2 HEX NUT ASTM A194-2H

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

MANUFACTURER	MANUFACTURER REF
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PHYSICAL INSPECTION RESULT:

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

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PT. Sinergi Solusi Teknik

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MATERIAL CATALOGING REPORT - APPROVAL SHEET

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OLD DESCRIPTION		NEW DESCRIPTION	
MATERIAL NUMBER	8138611401	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

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PHYSICAL INSPECTION RESULT:

POTENTIAL DUPLICATION WITH OTHER MATERIAL(S): 8138611401, 8138611421, 9900234443.

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PT. Sinergi Solusi Teknik

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