TECHNIPLATE ELECTROPLATERS

SABS ISO 9001/2000

SOUTH AFRICA

[redacted]

COMPLIANCE CERTIFICATE

CERTIFICATE NO: 140699

BIN NO: LINE 11

WE HEREBY CERTIFY THAT THE ITEMS NOTED BELOW COMPLY WITH THE STATED SPECIFICATION

Description	Part No	Batch No	Specification.	Plating Thickness Min. & Max.
Weight 1304 kg 20MM HT	DIN 934 NUTS	3628	Zinc plated and Trivalent Blue Passivated To minimum of 8 microns to Withstand 96 hours SALT SPRAYTEST For Red Rust	8 –10 Microns

Signed: .....
Quality Assurance
Techniplate Electroplaters

TECHNIPLATE
CR6 - FREE
PASSIVATION

TECHNIPLATE ELECTROPLATERS

SABS ISO 9001/2000

COMPLIANCE CERTIFICATE

[redacted]

CERTIFICATE NO: 204112 BIN NO: 0

WE HEREBY CERTIFY THAT THE ITEMS NOTED BELOW COMPLY WITH THE STATED SPECIFICATION

Description	Part No	Batch No	Specification	Plating Thickness Min. & Max.
16MM H/T NUTS Weight: 1,000 kg	0	5758	Zinc Plated 5 to 9 Mic. Passivated blue Cr6 Free (Tri-Valent) to min 5 mic thick to withstand 96 Hours Saltspray Test to Red Rust	Min: 7 Max: 10 Microns

TECHNIPLATE
FREE
ON

Signed.....
Quality Assurance
Techniplate Electroplaters
350 Toop Street

MATERIAL IDENTIFICATION CERTIFICATE

This document complies to BS EN 10204 3.1

CERT. NO : 18NL 2083941
ORDER NO : 18NL 2083941
CUSTOMER ORD NO : 7299/4
CUSTOMER NO : 11277
TRUCK NO : TYP955GP
SAP ORD NO : 1500184418

NAME AND ADDRESS OF SENDER

ArcelorMittal South Africa Limited 1989/002164/06
Newcastle Works Iscor Road, Newcastle, 2940, South Africa

CUSTOMER

[redacted]

NAME AND ADDRESS OF CONSIGNEE

[redacted]

DESCRIPTION OF GOODS

Profile: Bolt and Nut Rounds Coiled : 22 mm
Specification: SAE/AISI 1015
C,11/,17 Mn,30/,60 P/S,025x Si,05x Al,03/,07 N,008x
LENGTH : mm
TOLERANCE : SPE 231

CHEMICAL ANALYSIS

Cast	C %	Mn %	P %	S %	Si %	Al %	Nb %	Cr %	N %	Cu %	Ni %	Mo %	V %	Ti %	Sn %	B %	Ca %	As %	Sb %	Pb %	H# ppm	CEV#	Date Tested
1204453	0.13	0.36	0.012	0.003	0.02	0.034		0.010	0.004	0.007	0.010	0.001											

MECHANICAL PROPERTIES and METALLURGICAL RESULTS

Cast	ReH MPa	Rm MPa Ave	Rm MPa Min	Rm MPa Max	Rm MPa Std Dev	A %	Z %	Impacts: (J) Ave	Hardness HBW Min	Hardness HBW Max	Bend	Rebend	Grain Sz ASTM E112	Decarb (mm) ASTM E1077 Ave	Decarb (mm) ASTM E1077 Max	Jominy	Inclusion ASTM E45 Method A A T	A H	B T	B H	C T	C H	D T	D H	Grossman Factor#
1204453																									

ReH : Yield Stress Rm: Tensile Strength A: Elongation Z: Reduction of Area HB: Brinell Hardness CEV: Carbon Equivalent Value

STANDARD REMARKS :

Inclusions: conforms to ASTM E45 level 2 max (type A - D).

M16 DIN 934 HT Hots BLK 12PL /HDG

ISO 9001:2008 CERTIFICATION (DQS CERTIFICATION SYSTEM): THE MATERIAL HEREIN HAS BEEN MADE USING THE BASIC OXYGEN PROCESS AND CONTINUOUSLY CAST. SAMPLING IS EXECUTED BY THE PLANT ACCORDING TO THE SPECIFICATION REQUIREMENTS. TESTING IS CONDUCTED ON THE SAMPLES SUPPLIED. INSPECTION AND TESTING COMPLIES WITH THE SPECIFICATION REQUIREMENTS AND ADDITIONAL CUSTOMER REQUIREMENTS FOR THE MATERIAL. A COPY OF THE DQS CERTIFICATE IS AVAILABLE UPON REQUEST.(NOT ACCREDITED BY SANAS).
ISO 17025:2005 ACCREDITATION: TESTING IS PERFORMED ACCORDING TO THE FOLLOWING SANAS ACCREDITED PROCEDURES. Viz - ASTM E-415, ASTM E-1019, ASTM E 112, ASTM E 1077, ASTM E 45, DIN 50 602, ISO 6892-1:2009 B, E 10, ASTM E18, ISO 10 065, EN 10.045-1 & ISO 5-42 AND ISO 10 606. ITEMS MARKED # ARE NOT SANAS ACCREDITED. UNCERTAINTY AND BMC VALUES ARE AVAILABLE ON REQUEST.

CERTIFICATE OF TEST AND ANA[illegible] - Revision 3.0
This document complies to BS EN 10204

CER[illegible] 18NL 8030291
ORDE[illegible]O : 18NL 8030291

ArcelorMittal

NAME AND ADDRESS OF SENDER
ArcelorMittal South Africa Limited (REG NO. 89/02164/06)
ArcelorMittal South Africa Newcastle Works Iscor Road, Newcastle, 2940, South Africa

CUSTOMER ORD NO : 6765
CUSTOMER NO : 11277
SHIP :
SAP ORD NO : 1500103527

CUSTOMER	NAME AND ADDRESS OF CONSIGNEE	DESCRIPTION OF GOODS
[redacted]	[redacted]	Profile: Bolt and Nut Rounds Coiled : 28 mm Specification: SAE/AISI 1015 C,11/,17 Mn,30/,60 P/S,025x Si,05x Al,03/,07 N,008x LENGTH : mm TOLERANCE : SPE 231

CHEMICAL ANALYSIS

Cast	C %	Mn %	P %	S %	Si %	Al %	Nb %	Cr %	N %	Cu %	Ni %	Mo %	V %	Ti %	Sn %	B %	Ca %	As %	Sb %	Pb %	H# ppm				CEV#
0802117	0.13	0.34	0.008	0.004	0.03	0.031		0.031	0.004	0.032	0.017	0.003													

MECHANICAL PROPERTIES and METALLURGICAL RESULTS

Cast	ReH MPa	Rm MPa				A	Z	Impact Test at (temp) °C	Hardness HB		Bend	Rebend	Grain Size	Decarb mm		Jominy	Inclusion ASTM E45 Method A								Gross-man Factor#
		Ave	Min	Max	Std Dev	%	%	Ave	Min	Max			ASTM	Ave	Max		A		B		C		D		
																	T	H	T	H	T	H	T	H	
0802117	256	376	375	378		37	64																		

ReH: Yield Stress Rm: Tensile Strength A: Elongation = 5.65*sqrt(So) Z: Reduction of Area HB: Brinell Hardness CEV: Carbon Equivalent Value

STANDARD REMARKS :

Inclusions: conforms to ASTM E45 level 2 max (type A - D).

M20 x 2,5P } DIN 934, Class 8
M20 x 1,5P

EDMUND KHUMALO
PRODUCT CERTIFICATION

SANAS ACCREDITED LABORATORY T0165

ISO 9001:2000 CERTIFICATION (DQS CERTIFICATION SYSTEM): THE MATERIAL HEREIN HAS BEEN MADE USING THE BASIC OXYGEN PROCESS AND CONTINUOUSLY CAST. SAMPLING IS EXECUTED BY THE PLANT ACCORDING TO THE SPECIFICATION REQUIREMENTS.TESTING IS CONDUCTED ON THE SAMPLES SUPPLIED. INSPECTION AND TESTING COMPLIES WITH THE SPECIFICATION REQUIREMENTS AND ADDITIONAL CUSTOMER REQUIREMENTS FOR THE MATERIAL. A COPY OF THE DQS CERTIFICATE IS AVAILABLE UPON REQUEST.(NOT ACREDDITED BY SANAS).
ISO 17025:2005 ACCREDITATION: TESTING IS PERFORMED ACCORDING TO THE FOLLOWING SANAS ACCREDITED PROCEDURES. VIZ. ASTM E-415, ASTM E-1019, ASTM E 112, ASTM E 1077, ASTM E 45, DIN 50 602, EN 10 002 PART 1, E 10, ASTM E18, ISO 10 065, EN 10 045 1 & 12 [illegible] AND ISO 10 606 ITEMS MARKED # ARE NOT SANAS ACCREDITED. UNCERTAINTY AND BMC VALUES ARE AVAILABLE ON REQUEST.

This certificate is issued with the ArcelorMittal logo in colour and without erasure or alteration

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