



# GEM-YEAR TESTING LABORATORY

## CERTIFICATE OF INSPECTION

MANUFACTURER : GEM-YEAR INDUSTRIAL CO., LTD.  
ADDRESS : NO.8 GEM-YEAR  
ROAD, E.D.Z., JIASHAN, ZHEJIANG, P.R. CHINA

Tel: (0573)84185001(48Lines)  
Fax: (0573)84184488 84184567  
DATE : 2019/12/17

PURCHASER : MAPTCO FASTENERS (AUST) PTY LTD  
PO. NUMBER : MAP-1938M  
COMMODITY : AS1252 STRUCTURAL BOLT L/T CHANGE CL 8.8  
SIZE : M20-P2.50X55/38  
LOT NO : 1B199A162 (1A2019C0161)  
SHIP QUANTITY : 50,300 PCS  
HEADMARKS : GENIUS SYMBOL & 3 RADIAL LINES & 8.8  
COUNTRY OF ORIGIN : CHINA

PACKING NO : GEM191031002  
INVOICE NO : GEM/MAP-191216MEL  
PART NO : G049  
SAMPLING PLAN :  
ASME B18.18-2017/ASTM F1470-2018  
HEAT NO : 18106222-3  
MATERIAL : 20MTB  
FINISH : H. T. HOT DIP GAL PER ASTM  
A153/ASTM F2329

**PERCENTAGE COMPOSITION OF CHEMISTRY : TEST FACILITY : S**

Chemistry	B%	C%	Mn%	P%	S%	Si%
Spec. : MIN.	0.0005	0.1700	1.3000			0.1700
MAX.	0.0030	0.2400	1.6000	0.0250	0.0250	0.3700
Test Value	0.0022	0.2000	1.3900	0.0190	0.0030	0.2100

**DIMENSIONAL INSPECTIONS : ACCORDING TO AS1252-1983 TEST FACILITY: M**

SAMPLED BY : FCHUN

INSPECTIONS ITEM	SAMPLE	TEST METHOD	REF	SPECIFIED	ACTUAL RESULT	ACC.	REJ.
THREAD LENGTH	15 PCS	JB/T 9151		38.0000-45.5000 MM	39.3500-39.6700 MM	15	0
MAJOR DIAMETER	5 PCS	JB/T 9151		19.6700-20.0000 MM	19.8000-19.8800 MM	5	0
BODY DIAMETER	5 PCS	JB/T 9151		19.1600-20.8900 MM	19.8200-19.8800 MM	5	0
WIDTH ACROSS CORNERS	5 PCS	JB/T 9151		Min. 35.0300 MM	36.2100-36.2600 MM	5	0
HEIGHT	5 PCS	JB/T 9151		12.1000-13.9000 MM	12.2100-12.2400 MM	5	0
NOMINAL LENGTH	15 PCS	JB/T 9151		53.5000-56.5000 MM	54.7200-54.8100 MM	15	0
WIDTH ACROSS FLATS	5 PCS	JB/T 9151		31.0000-32.0000 MM	31.7500-31.8100 MM	5	0
SURFACE DISCONTINUITIES	29 PCS	ISO6157.3			PASSED	29	0
THREAD	15 PCS	JB/T 9151		nut	PASSED	15	0

**MECHANICAL PROPERTIES : ACCORDING TO AS1252-1996 TEST FACILITY: M**

SAMPLED BY : SHENXIA JIN

INSPECTIONS ITEM	SAMPLE	TEST METHOD	REF	SPECIFIED	ACTUAL RESULT	ACC.	REJ.
CORE HARDNESS	15 PCS	ISO898.1		23-34 HRC	29.5-30.5 HRC	15	0
PROOF LOAD	15 PCS	ASTM F606/F606M		Min. 147,000 N	147,001-147,005 N	15	0
TENSILE STRENGTH	5 PCS	ISO898.1		Min. 830 N/MM2	970-980 N/MM2	5	0
WEDGE LOAD	15 PCS	ISO898.1		Min. 203,000 N	215,793-221,927 N	15	0
YIELD STRENGTH	15 PCS	ISO898.1		Min. 660 N/MM2	764-799 N/MM2	15	0
SURFACE HARDNESS (UNLIKE CORE HARDNESS 30 HV)	15 PCS	ISO898.1			OK	15	0
PLATING THICKNESS ( μ m)	4 PCS	ASTM B568		>=53	61.08-67.34	4	0



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ALL TESTS ARE IN ACCORDANCE WITH THE METHODS PRESCRIBED IN THE APPLICABLE ASTM/SAE/ASME/MIL-STD-120 SPECIFICATION. WE CERTIFY THAT THIS DATA IS A TRUE REPRESENTATION OF INFORMATION PROVIDED BY THE MATERIAL SUPPLIER AND OUR TESTING LABORATORY.

THE REPORT IS ISSUED ACCORDING TO ISO16228 F3.1(EN10204 3.1)

TYPE M : MANUFACTURER

TYPE S : SUPPLIER (STEEL MILL, PLATING SUB SUPPLIER, HEAT TREATMENT SUB SUPPLIER ETC.,)

SIGNATURE : \_\_\_\_\_