



# GEM-YEAR TESTING LABORATORY

## CERTIFICATE OF INSPECTION

MANUFACTURER : GEM-YEAR INDUSTRIAL CO., LTD.  
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ROAD, E.D.Z., JIASHAN, ZHEJIANG, P.R. CHINA

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DATE : 2020/01/04

PURCHASER : MAPTCO FASTENERS (AUST) PTY LTD  
PO. NUMBER : MAP-1946M  
COMMODITY : ISO 4017 HEX HEAD BOLT FULL THREAD CL 10.9  
SIZE : M12-P1.75X35  
LOT NO : 1B19B0833  
SHIP QUANTITY : 31,500 PCS  
HEADMARKS : GENIUS SYMBOL & 10.9  
COUNTRY OF ORIGIN : CHINA

PACKING NO : GEM191224003  
INVOICE NO : GEM/MAP-200106MEL  
PART NO : A488  
SAMPLING PLAN :  
ASME B18.18-2017/ASTM F1470-2018  
HEAT NO : 19309639-4  
MATERIAL : SCM435  
FINISH : H. T. TRIVALENT ZINC 5U  
HYDROGEN RELEASE

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

Chemistry	C%	Cr%	Mn%	Mo%	P%	S%	Si%
Spec. : MIN.	0.3300	0.9000	0.6000	0.1500			0.1500
MAX.	0.3800	1.2000	0.8500	0.3000	0.0250	0.0250	0.3500
Test Value	0.3500	0.9700	0.6800	0.1700	0.0180	0.0120	0.2200

**DIMENSIONAL INSPECTIONS : ACCORDING TO ISO4017-2014 TEST FACILITY: M**

SAMPLED BY : RENDM

INSPECTIONS ITEM	SAMPLE	TEST METHOD	REF	SPECIFIED	ACTUAL RESULT	ACC.	REJ.
MAJOR DIAMETER	4PCS	JB/T 9151		11.7100-11.9600 MM	11.7800-11.8300 MM	4	0
WIDTH ACROSS CORNERS	4PCS	JB/T 9151		Min. 20.0300 MM	20.3600-20.3700 MM	4	0
HEIGHT	4PCS	JB/T 9151		7.3200-7.6800 MM	7.4400-7.5300 MM	4	0
NOMINAL LENGTH	15PCS	JB/T 9151		34.5000-35.5000 MM	34.8800-35.1200 MM	15	0
WIDTH ACROSS FLATS	4PCS	JB/T 9151		17.7300-18.0000 MM	17.8000-17.8800 MM	4	0
SURFACE DISCONTINUITIES	29PCS	ISO6157.3			PASSED	29	0
THREAD	15PCS	JB/T 9151		6h GO 6h NOGO	PASSED	15	0

**MECHANICAL PROPERTIES : ACCORDING TO ISO 898.1-2013 TEST FACILITY: M**

SAMPLED BY : LSHWEN

INSPECTIONS ITEM	SAMPLE	TEST METHOD	REF	SPECIFIED	ACTUAL RESULT	ACC.	REJ.
CORE HARDNESS	15PCS	ISO898.1		32-39 HRC	35-37.9 HRC	15	0
SURFACE HARDNESS	15PCS	ASTM E384		Max. 390 HV	352-376 HV	15	0
TENSILE STRENGTH	4PCS	ISO898.1		Min. 1,040 N/MM2	1,100-1,100 N/MM2	4	0

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.,)

WE CERTIFY THE PARTS ARE ROHS COMPLIANT.

SIGNATURE : 