



**GEM-YEAR TESTING LABORATORY
CERTIFICATE OF INSPECTION**

MANUFACTURER: GEM-YEAR INDUSTRIAL CO., LTD.

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

PURCHASER: MAPTCO FASTENERS (AUST) PTY LTD

PO. NUMBER: MAP-2011S

COMMODITY: ISO 4014 HEX HEAD BOLT HALF THREAD CL 8.8

SIZE: M20-2.50X60

LOT NO: 1B2030928

SHIP QUANTITY: 1,400 PCS

HEADMARKS: GENIUS SYMBOL & 8.8

COUNTRY OF ORIGIN: CHINA

TEL: (0573) 84185001 (48Lines)

FAX: (0573) 84184488 84184567

DATE: 2020/05/18

PACKING NO: GEM200426003

INVOICE NO: GEM/MAP-200518SYD

PART NO: A1106

SAMPLING PLAN:
ASME B18.18-2017/ASTM F1470-2018

HEAT NO: 20200492

MATERIAL: ML40CR

FINISH: H. T. PLAIN

PERCENTAGE COMPOSITION OF CHEMISTRY: TEST FACILITY :S

| Chemistry | C% | Cr% | Mn% | P% | S% | Si% |
|------------|--------|--------|--------|--------|--------|--------|
| Spec.:MIN. | 0.3800 | 0.9000 | 0.6000 | | | |
| MAX. | 0.4500 | 1.2000 | 0.9000 | 0.0350 | 0.0350 | 0.3000 |
| Test Value | 0.4100 | 0.9900 | 0.7100 | 0.0100 | 0.0040 | 0.1600 |

DIMENSIONAL INSPECTIONS: ACCORDING TO ISO4014-2011 TEST FACILITY : M

SAMPLED BY: ZHANGHONGYUN

| INSPECTIONS ITEM | SAMPLE | TEST METHOD | REF | SPECIFIED | ACTUAL RESULT | ACC | REJ. |
|-------------------------|--------|-------------|-----|--------------------|--------------------|--------|------|
| HEIGHT | 4 PCS | JB/T 9151 | 46 | 12.2900-12.7100 MM | 12.5200-12.5500 MM | 4 | 0 |
| WIDTH ACROSS FLATS | 4 PCS | JB/T 9151 | | 29.6700-30.0000 MM | 29.8600-29.8800 MM | 4 | 0 |
| THREAD LENGTH | 15 PCS | JB/T 9151 | | 46.7500-46.9200 MM | 46.7500-46.9200 MM | 15 | 0 |
| BODY DIAMETER | 4 PCS | JB/T 9151 | | 19.6700-20.0000 MM | 19.8600-19.8800 MM | 4 | 0 |
| NOMINAL LENGTH | 15 PCS | JB/T 9151 | | 59.4000-60.6000 MM | 60.0300-60.2100 MM | 15 | 0 |
| WIDTH ACROSS CORNERS | 4 PCS | JB/T 9151 | | Min. 33.5300 MM | 33.8200-33.8500 MM | 4 | 0 |
| MAJOR DIAMETER | 4 PCS | JB/T 9151 | | 19.6300-19.9500 MM | 19.8600-19.8800 MM | 4 | 0 |
| SURFACE DISCONTINUITIES | 22 PCS | IS06157.3 | | | PASSED | 22 | 0 |
| THREAD | 4 PCS | JB/T 9151 | | | 6g GO 6g NOGO | PASSED | 4 |

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

SAMPLED BY: NIESUYING

| INSPECTIONS ITEM | SAMPLE | TEST METHOD | REF | SPECIFIED | ACTUAL RESULT | ACC | REJ. |
|------------------|--------|-------------|-----|----------------|---------------|-----|------|
| SURFACE HARDNESS | 15 PCS | ASTM E384 | | Max. 365 HV | 300-320 HV | 15 | 0 |
| CORE HARDNESS | 15 PCS | IS0898.1 | | 23-34 HRC | 30-32 HRC | 15 | 0 |
| TENSILE STRENGTH | 4 PCS | IS0898.1 | | Min. 830 N/MM2 | 910-922 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.



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