



**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-2022M  
 COMMODITY: ISO 4014 HEX HEAD BOLT HALF THREAD CL 8.8  
 SIZE: M20-2.50X120  
 LOT NO: 1B2060245  
 SHIP QUANTITY: 840 PCS  
 HEADMARKS: GENIUS SYMBOL & 8.8  
 COUNTRY OF ORIGIN: CHINA

TEL: (0573) 84185001 (48Lines)  
 FAX: (0573) 84184488 84184567  
 DATE: 2020/08/24  
 PACKING NO: GEM200804003  
 INVOICE NO: GEM/MAP-200824MEL  
 PART NO: A1159  
 SAMPLING PLAN:  
 ASME B18.18-2017/ASTM F1470-2018  
 HEAT NO: 20302309  
 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 | 1.0000 | 0.7100 | 0.0120 | 0.0010 | 0.1500 |

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

SAMPLED BY: ZHANGHONGYUN

| INSPECTIONS ITEM        | SAMPLE | TEST METHOD | REF | SPECIFIED            | ACTUAL RESULT        | ACC | REJ |
|-------------------------|--------|-------------|-----|----------------------|----------------------|-----|-----|
| NOMINAL LENGTH          | 15 PCS | JB/T 9151   |     | 119.3000-120.7000 MM | 120.0300-120.2600 MM | 15  | 0   |
| THREAD LENGTH           | 15 PCS | JB/T 9151   | 46  |                      | 52.1200-52.4200 MM   | 15  | 0   |
| HEIGHT                  | 4 PCS  | JB/T 9151   |     | 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   |
| SURFACE DISCONTINUITIES | 22 PCS | ISO6157.3   |     |                      | PASSED               | 22  | 0   |
| BODY DIAMETER           | 4 PCS  | JB/T 9151   |     | 19.6700-20.0000 MM   | 19.8600-19.8800 MM   | 4   | 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   |
| THREAD                  | 15 PCS | JB/T 9151   |     | 6g GO 6g NOGO        | PASSED               | 15  | 0   |

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 | ISO898.1    |     | Max. 365 HV    | 296-308 HV    | 15  | 0   |
| CORE HARDNESS    | 15 PCS | ISO898.1    |     | 23-34 HRC      | 25-30 HRC     | 15  | 0   |
| TENSILE STRENGTH | 4 PCS  | ISO898.1    |     | Min. 830 N/MM2 | 917-931 N/MM2 | 4   | 0   |

ALL TESTS ARE IN ACCORDANCE WITH THE METHODS PRESCRIBED IN THE APPLICABLE ASTM/SAE/ASME. 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: