



**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-2014M
 COMMODITY: AS1252 STRUCTURAL BOLT CL 8.8
 SIZE: M24-3.00X80
 LOT NO: 1B2050748(1A20809871)
 SHIP QUANTITY: 1,584 PCS
 HEADMARKS: GENIUS SYMBOL & 3 RADIAL LINES & 8.8
 COUNTRY OF ORIGIN: CHINA

TEL: (0573) 84185001 (48Lines)
 FAX: (0573) 84184488 84184567
 DATE: 2020/09/04
 PACKING NO: GEM200821004
 INVOICE NO: GEM/MAP-200906MEL
 PART NO: G084
 SAMPLING PLAN:
 ASME B18.18-2017/ASTM F1470-2018
 HEAT NO: 205D0983
 MATERIAL: ML20MTB
 FINISH: H. T. HOT DIP GAL PER ASTM
 A153/ASTM F2329

PERCENTAGE COMPOSITION OF CHEMISTRY: TEST FACILITY :S

| Chemistry | Al% | B% | C% | Mn% | P% | S% | Si% | Ti% |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Spec.:MIN. | 0.0200 | 0.0008 | 0.1800 | 1.3000 | | | 0.1000 | 0.0400 |
| MAX. | | 0.0035 | 0.2300 | 1.6000 | 0.0250 | 0.0250 | 0.3000 | 0.1000 |
| Test Value | 0.0410 | 0.0021 | 0.2100 | 1.4600 | 0.0150 | 0.0030 | 0.1900 | 0.0800 |

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

SAMPLED BY: WUMENGJIE

| INSPECTIONS ITEM | SAMPLE | TEST METHOD | REF | SPECIFIED | ACTUAL RESULT | ACC | REJ |
|-------------------------|--------|-------------|-----|--------------------|--------------------|-----|-----|
| NOMINAL LENGTH | 13 PCS | JB/T 9151 | | 79.4000-80.6000 MM | 79.9200-80.0600 MM | 13 | 0 |
| HEIGHT | 3 PCS | JB/T 9151 | | 14.1000-14.3500 MM | 14.3200-14.3500 MM | 3 | 0 |
| SURFACE DISCONTINUITIES | 18 PCS | IS06157.3 | | | PASSED | 18 | 0 |
| THREAD LENGTH | 13 PCS | JB/T 9151 | 54 | | 53.9700-54.3800 MM | 13 | 0 |
| MAJOR DIAMETER | 3 PCS | JB/T 9151 | | 23.6300-24.0000 MM | 23.7900-23.8300 MM | 3 | 0 |
| WIDTH ACROSS CORNERS | 3 PCS | JB/T 9151 | | Min. 45.2000 MM | 46.4600-46.5100 MM | 3 | 0 |
| BODY DIAMETER | 3 PCS | JB/T 9151 | | 23.1600-24.0000 MM | 23.8800-23.8900 MM | 3 | 0 |
| WIDTH ACROSS FLATS | 3 PCS | JB/T 9151 | | 40.0000-41.0000 MM | 40.6700-40.8100 MM | 3 | 0 |
| THREAD | 13 PCS | JB/T 9151 | | nut | PASSED | 13 | 0 |

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

SAMPLED BY: NIESUYING

| INSPECTIONS ITEM | SAMPLE | TEST METHOD | REF | SPECIFIED | ACTUAL RESULT | ACC | REJ |
|---|--------|-----------------|-----|----------------|-------------------|-----|-----|
| CORE HARDNESS | 13 PCS | IS0898.1 | | 23-34 HRC | 27-29 HRC | 13 | 0 |
| SURFACE HARDNESS (UNLIKE CORE HARDNESS 30 HV) | 13 PCS | IS0898.1 | | | OK | 13 | 0 |
| WEDGE LOAD | 13 PCS | IS0898.1 | | Min. 293,000 N | 293,000-293,015 N | 13 | 0 |
| PROOF LOAD | 13 PCS | ASTM F606/F606M | | Min. 212,000 N | 212,000-212,013 N | 13 | 0 |
| TENSILE STRENGTH | 3 PCS | IS0898.1 | | Min. 830 N/MM2 | 869-895 N/MM2 | 3 | 0 |
| YIELD STRENGTH | 13 PCS | IS0898.1 | | Min. 660 N/MM2 | 660-662 N/MM2 | 13 | 0 |
| PLATING THICKNESS(μm) | 8 PCS | ASTM B568 | | >=53 | 72.88-79.84 | 8 | 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.,)



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WE CERTIFY THE PARTS ARE ROHS COMPLIANT.

SIGNATURE: