



**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-2016M
 COMMODITY: ISO 4017 HEX HEAD BOLT FULL THREAD CL 8.8
 SIZE: M18-2.50X45
 LOT NO: 1B2041816
 SHIP QUANTITY: 3,600 PCS
 HEADMARKS: GENIUS SYMBOL & 8.8
 COUNTRY OF ORIGIN: CHINA

TEL: (0573) 84185001 (48Lines)
 FAX: (0573) 84184488 84184567
 DATE: 2020/06/17
 PACKING NO: GEM200528003
 INVOICE NO: GEM/MAP-200620MEL
 PART NO: A996
 SAMPLING PLAN:
 ASME B18.18-2017/ASTM F1470-2018
 HEAT NO: 19212511-4
 MATERIAL: 40ACR
 FINISH: H. T. TRIVALENT ZINC PER ASTM F1941

PERCENTAGE COMPOSITION OF CHEMISTRY: TEST FACILITY :S

| Chemistry | C% | Cr% | Mn% | P% | S% | Si% |
|------------|--------|--------|--------|--------|--------|--------|
| Spec.:MIN. | 0.4000 | 0.2000 | 0.6000 | | | |
| MAX. | 0.4400 | 0.4000 | 0.9000 | 0.0250 | 0.0250 | 0.1000 |
| Test Value | 0.4300 | 0.2700 | 0.7800 | 0.0150 | 0.0020 | 0.0700 |

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

SAMPLED BY: ZHONGLI

| INSPECTIONS ITEM | SAMPLE | TEST METHOD | REF | SPECIFIED | ACTUAL RESULT | ACC | REJ |
|-------------------------|--------|-------------|-----|--------------------|--------------------|-----|-----|
| NOMINAL LENGTH | 15 PCS | JB/T 9151 | | 44.5000-45.5000 MM | 44.6500-45.2100 MM | 15 | 0 |
| SURFACE DISCONTINUITIES | 22 PCS | ISO6157.3 | | | PASSED | 22 | 0 |
| HEIGHT | 4 PCS | JB/T 9151 | | 11.2900-11.7100 MM | 11.3500-11.6500 MM | 4 | 0 |
| WIDTH ACROSS FLATS | 4 PCS | JB/T 9151 | | 26.6700-27.0000 MM | 26.7500-26.8600 MM | 4 | 0 |
| MAJOR DIAMETER | 4 PCS | JB/T 9151 | | 17.6300-17.9500 MM | 17.7600-17.8600 MM | 4 | 0 |
| WIDTH ACROSS CORNERS | 4 PCS | JB/T 9151 | | Min. 30.1400 MM | 30.1400-30.1900 MM | 4 | 0 |
| THREAD | 15 PCS | JB/T 9151 | | 6h GO 6h NOGO | PASSED | 15 | 0 |

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

SAMPLED BY: DAIWENTING

| INSPECTIONS ITEM | SAMPLE | TEST METHOD | REF | SPECIFIED | ACTUAL RESULT | ACC | REJ |
|------------------|--------|-------------|-----|----------------|---------------|-----|-----|
| SURFACE HARDNESS | 15 PCS | ASTM E384 | | Max. 365 HV | 251-273 HV | 15 | 0 |
| CORE HARDNESS | 15 PCS | ISO898.1 | | 23-34 HRC | 28.1-29.9 HRC | 15 | 0 |
| TENSILE STRENGTH | 4 PCS | ISO898.1 | | Min. 830 N/MM2 | 935-940 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: