



**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-2029S
 COMMODITY: ISO 4014 HEX HEAD BOLT HALF THREAD CL 8.8
 SIZE: M16-2.00X65
 LOT NO: 1B2072334
 SHIP QUANTITY: 1,750 PCS
 HEADMARKS: GENIUS SYMBOL & 8.8
 COUNTRY OF ORIGIN: CHINA

TEL: (0573) 84185001 (48Lines)
 FAX: (0573) 84184488 84184567
 DATE: 2020/09/07
 PACKING NO: GEM200824006
 INVOICE NO: GEM/MAP-200907SYD
 PART NO: A870
 SAMPLING PLAN:
 ASME B18.18-2017/ASTM F1470-2018
 HEAT NO: 20301597
 MATERIAL: 40ACR
 FINISH: H. T. TRIVALENT ZINC PER ASTM F1941

PERCENTAGE COMPOSITION OF CHEMISTRY: TEST FACILITY :S

| Chemistry | Al% | C% | Cr% | Cu% | Mn% | Ni% | P% | S% | Si% |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Spec.:MIN. | 0.0100 | 0.4000 | 0.2000 | | 0.6000 | | | | |
| MAX. | | 0.4400 | 0.4000 | 0.2000 | 0.9000 | 0.2000 | 0.0250 | 0.0250 | 0.1000 |
| Test Value | 0.0250 | 0.4200 | 0.2800 | 0.0200 | 0.7800 | 0.0100 | 0.0120 | 0.0030 | 0.0800 |

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

SAMPLED BY: ZHONGLI

| INSPECTIONS ITEM | SAMPLE | TEST METHOD | REF | SPECIFIED | ACTUAL RESULT | ACC | REJ |
|-------------------------|--------|-------------|-----|--------------------|--------------------|-----|-----|
| WIDTH ACROSS FLATS | 4 PCS | JB/T 9151 | | 23.6700-24.0000 MM | 23.6700-24.0000 MM | 4 | 0 |
| MAJOR DIAMETER | 4 PCS | JB/T 9151 | | 15.6900-15.9600 MM | 15.6900-15.9600 MM | 4 | 0 |
| NOMINAL LENGTH | 15 PCS | JB/T 9151 | | 64.4000-65.6000 MM | 64.4000-65.6000 MM | 15 | 0 |
| BODY DIAMETER | 4 PCS | JB/T 9151 | | 15.7300-16.0000 MM | 15.7300-16.0000 MM | 4 | 0 |
| THREAD LENGTH | 15 PCS | JB/T 9151 | 38 | | 38.1000-38.1100 MM | 15 | 0 |
| HEIGHT | 4 PCS | JB/T 9151 | | 9.8200-10.1800 MM | 9.8200-10.1800 MM | 4 | 0 |
| SURFACE DISCONTINUITIES | 22 PCS | ISO6157.3 | | | PASSED | 22 | 0 |
| WIDTH ACROSS CORNERS | 4 PCS | JB/T 9151 | | Min. 26.7500 MM | 26.7500-26.7600 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: NIESUYING

| INSPECTIONS ITEM | SAMPLE | TEST METHOD | REF | SPECIFIED | ACTUAL RESULT | ACC | REJ |
|------------------|--------|-------------|-----|----------------|---------------|-----|-----|
| TENSILE STRENGTH | 4 PCS | ISO898.1 | | Min. 800 N/MM2 | 863-889 N/MM2 | 4 | 0 |
| CORE HARDNESS | 15 PCS | ISO898.1 | | 22-32 HRC | 29-30 HRC | 15 | 0 |
| SURFACE HARDNESS | 15 PCS | ASTM E384 | | Max. 350 HV | 296-303 HV | 15 | 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: