



**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-2014F  
 COMMODITY: FLAT ROUND WASHER --  
 SIZE: M12  
 LOT NO: 1F2060239(1A20714521)  
 SHIP QUANTITY: 3,600 PCS  
 HEADMARKS:  
 COUNTRY OF ORIGIN: CHINA

TEL: (0573) 84185001 (48Lines)  
 FAX: (0573) 84184488 84184567  
 DATE: 2020/07/31  
 PACKING NO: GEM200717001  
 INVOICE NO: GEM/MAP-200805FRE  
 PART NO: G013  
 SAMPLING PLAN:  
 ASME B18.18-2017/ASTM F1470-2018  
 HEAT NO: 20700585  
 MATERIAL: 45A  
 FINISH: H. T. HOT DIP GAL PER ASTM  
 A153/ASTM F2329

**PERCENTAGE COMPOSITION OF CHEMISTRY: TEST FACILITY :S**

Chemistry	C%	Cr%	Cu%	Mn%	Ni%	P%	S%	Si%
Spec.:MIN.	0.4200			0.5000				0.1700
MAX.	0.5000	0.2500	0.2500	0.8000	0.3000	0.0350	0.0350	0.3700
Test Value	0.4700	0.0600	0.0100	0.6100	0.0300	0.0120	0.0040	0.2200

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

SAMPLED BY: ZHANGHUIJIN

INSPECTIONS ITEM	SAMPLE	TEST METHOD	REF	SPECIFIED	ACTUAL RESULT	ACC	REJ
WASHER OUTSIDE DIAMETER	3 PCS	JB/T 9151		25.4000-27.0000 MM	25.9500-26.2200 MM	3	0
WASHER INSIDE DIAMETER	3 PCS	JB/T 9151		14.0000-14.4300 MM	14.0900-14.2500 MM	3	0
WASHER THICKNESS	3 PCS	JB/T 9151		3.1000-4.6000 MM	3.6500-3.9500 MM	3	0
SURFACE DISCONTINUITIES	18 PCS	IS06157.3			PASSED	18	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		26-45 HRC	41-42 HRC	13	0
PLATING THICKNESS( μm)	8 PCS	ASTM B568		>=53	69.06-75.02	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.,)

WE CERTIFY THE PARTS ARE ROHS COMPLIANT.

SIGNATURE: