



QM-C-7.1/COUPLER/0002
Inspection Plan(Check Sheet)

Item: Alliance II Coupler & its components
Specn. : 24-BD-79
Amd.: 3 of Aug' 91
Drg. No. & Alt.: SK-79556

1. Firm's Name :
2. Date (Period) of Inspection :
3. Contract Details :
 - a) Contract No. and Date :
 - b) Order Placing Authority :
 - c) Specification No. :
 - d) Drawing No. :
4. Quantity on order :
5. Earlier Passed Qty. :
6. Quantity offered for Inspection on Date :
7. Consignee :

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SUMMARY OF RESULTS
Lot Size : 100 Nos.

S.NO.	Parameters	Specified Value		Observation	
				Max.	Min.
1	Visual & Operational Check (Sample Size 05%)	No crack, hot tears, cold shuts & weld cracks and surface condition by SCRATA & Marking as per drawing Components should operate freely in assembled condition.			
2	Dimensional (Sample Size 05%)	Checked with firm's Gauges given in approved QAP.			
3	Physical Properties	Gr. B (Minimum)	Gr. C (Minimum)		
	i) Tensile Strength	49.2 Kg/mm ²	63.3 Kg/mm ²		
	ii) YS	26.7 Kg/mm ²	42.2 Kg/mm ²		
	iii) Elongation	24%	22%		
	iv) RA	36%	45%		
4	Chemical Composition (Maximum %)	C- 0.32 Mn.-0.90 P- 0.03 S- 0.03 Si- 0.60	C- 0.32 Mn.-1.85 P- 0.04 S- 0.04 Si- 1.50		
5	Hardness	137 – 208 BHN	179 – 241 BHN		
6	Heat Treatment	Record to be checked.			
7	Weight variation	+4.5% to – 3%			
8	Gauging	Checked with firm's Gauges given in approved QAP.			

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01. **Visual, Operation & Marking:** Sample size – 05% or min. 10 Nos.

	Specified	OBSERVED VALUE									
		1	2	3	4	5	6	7	8	9	10
Surface Defect	No cracks, hot tears, cold shuts & weld cracks and surface condition by SCRATA										
Marking	As per respective Drawing.										
Operation	Component should operate freely in assembled condition.										

02. **Dimensions:** Samples size 05% or Min. 10 Nos.

Specified	OBSERVED VALUE										
	1	2	3	4	5	6	7	8	9	10	
Checked with firm's Gauges given in approved QAP											

03. **Physical Test :** Sample size – one from each heat.

Mechanical Properties	Grade B (Min)	Grade C (Min)	OBSERVED VALUE										
			1	2	3	4	5	6	7	8	9	10	
UTS (kg/mm ²)	49.2	63.3											
YS (kg/mm ²)	26.7	42.2											
Elongation	24%	22%											
RA	36%	45%											

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4. Heat Details:

Heat No.											
Qty. Cast.											
Qty. Offered.											
Qty. Passed											
Qty. Balanced											

5. Chemical Composition: Sample size: One from each heat.

Chemical Analysis	Specified Value (Max. %)		OBSERVED VALUE									
	Grade B	Grade C	1	2	3	4	5	6	7	8	9	10
	Grade B	Grade C										
C	0.32	0.32										
Mn	0.90	1.85										
Si	0.60	1.50										
S	0.03	0.04										
P	0.03	0.04										

6. Hardness : Sample Size – 5% or min. 5 Nos.

GRADE	Specified Value	OBSERVED VALUE										
		1	2	3	4	5	6	7	8	9	10	
	BHN No.											
Grade B	137-208											
Grade C	179-241											

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7. Heat Treatment:

Record of heat treatment to be verified as per Specification	OK / NOT OK	
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8. Variation of Weight: One component per P.O.

Specified Value	Observation
Within +4.5 % to – 3%	

9. Gauge Check: Checked with firm's Gauges given in approved QAP.
(Sample Size – 05% or Min 10 Nos.)

ITEM	PARAMETERS	Checked with firm's Gauges given in approved QAP	
		Gauge No.	Observation
COUPLER BODY	10A COUNTER Gauge		
	Distance Between ears Fettle's gauge		
	Distance Between ears Insp. gauge		
	Ear Gauge.		
	10-A Contour Fettle's Gauge		
	Pin Protector Gauge		
	Knuckle limit & 10-A Contour Gauge		
	Details of Bush & Gauging Piece for Pulling Gauge		
	Hub & Pin protector distance gauge fettle		
	Pulling Lug Gauge		
	Protector distance gauge Inspection		
	Pin protector & shoulder gauge		
	Locking face gauge		
	Gauge to check locking face with regard to pin role & contour.		
	Difference gauge & pin for locking face gauge		
	Top & bottom pulling lug gauge		
Pulling lug 'Go' gauge (Head)			
Details of insert for lot contour gauge			

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ITEM	PARAMETERS	Checked with firm's Gauges given in approved QAP	
		Gauge No.	Observation
KNUNCKLE	Slice gauge & bobbin		
	Knuckle tail pocket and ear		
	Full knuckle profile gauge fettling		
	Details gauge of rotary lugs		
YOKE	Yoke Head Opening gauge		
	Out Side mouth opening gauge		
	Wall thickness gauge (Go & No-Go)		
	Out Side width gauge (Go & No-Go)		
	End width Go & No-Go gauge		
	Height Go & No-Go gauge		
	Pocket gauge (Go & No-Go)		
	Bore Dia Go & No-Go gauge		
LOCK	Lock leg shape gauge		
	Lock guide gauge		
	Lock profile gauge		
	Lock length gauge		
	Lock guide gauge		

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