



QM-C-7.1/Coupler/00011/B (Rev.-01) **Inspection Plan (Check Sheet)**

ITEM: Investment casting/Forging Components for Upgraded High Tensile Centre Buffer Coupler

: Toggle, Universal Lock Lift Lever connector, Lock Lift Lever Hook & Knuckle Thrower

Spec. No. : WD-70-BD-10 (Rev.3) or latest

Drg. No. & Alt.: SK-62724, Alt. 28 (Item-5, Item-6, Item-7 & Item-9)

Firm's Name :

Date (period) of Inspection :

Contract Details :

a. Contract no. and date :

b. Order placing authority :

c. Specification No. :

d. Drawing No. :

e. Quantity on order :

f. Earlier Passed Qty. :

g. Quantity offered for inspection on date:

h. Consignee :

SANJAI
JAUHRI

Digitally signed by SANJAI
JAUHRI
DN: cn=SANJAI JAUHRI, c=IN,
st=UTTAR PRADESH,
o=MINISTRY OF RAILWAYS,
ou=MINISTRY OF RAILWAYS,
serialNumber=BF5A8ACB62843
589C066D112792EE235F60B9
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Signature of Firm's Representative
M/s

Inspecting Official of RDSO



**SUMMARY OF RESULTS OF INVESTMENT CASTING/FORGING CBC COMPONENTS Gr.-B/
Class 2 of IS: 1875 or IS:2004.**

Specification No. WD-70-BD-10 (REV.3) or Latest, Drawing No. SK-62724 Alt. 28

(Lot Size – 200 Nos.)

	Parameters	Specified value	Observation	
			Max.	Min.
1	Visual & Operation Check (Sample size 10%)	No cracks, 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 10%)	By Go-No Go gauges (As per RDSO Drawing listed at Sn. 10)		
3	Physical Properties	Gr. B (Minimum)/ Class-2 of IS: 1875 or IS:2004		
	i) Tensile Strength	485 N/mm ²		
	ii) YS	260 N/mm ²		
	iii) Elongation	24%		
	iv) RA	36%		
4	Chemical composition	C-0.32 (max.), Mn-0.90 (max.), P-0.03 (max.), S-0.03 (max.), Si-0.60 (max.),		
5	Microstructure of Grade-B components	Ferrite-Pearlite		
6	Hardness	137-208 BHN		
7	Impact Test (ASTM A 370)	Energy : minimum 2.07 kg-m (at -7 ^o C)		
8	Heat treatment	Record to be checked		
9	Weight variation	+5% to -3% of the drawing value (100% weight variation to be checked by firm internally and same is to be cross verified randomly. The copy of the same should be attached with check sheet)		
10	Gauging of Coupler and JAUHRIans	As per Annexure-1 of Specification No. WD-70-BD-10 (Rev.03) or latest		

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JAUHRI

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ou=MANAK NAGAR, email=BF5ABACB62E435F
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1. Visual, Operation & marking : Sample size – 10% 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													
Marking	As per respective drawing													
Operation	Components should operate freely in assembled condition													

2. Dimensions : Sample size – 10% or min 10 nos.

Specified	Observed value													
	1	2	3	4	5	6	7	8	9	10				
As per respective drawing and with gauges as listed by RDSO at S.No. 10 of check sheet.														

3. Physical Test : Sample size – one per lot from Test Coupon

Mechanical Properties	GRADE B / Class-2 of IS: 1875 or IS:2004 (Min)	Observed value												
		1	2	3	4	5	6	7	8	9	10			
UTS	485 N/mm ²													
YS	260 N/mm ²													
Elongation	24%													
RA	36%													

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4. Chemical Composition : Sample size – three per lot from Lug/Test Coupon

Heat No.											
Qty. Cast											
Qty. Offered											
Qty. Passed											
Qty. Balance											

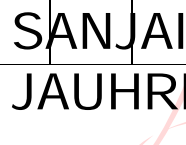
Chemical Analysis	Specified value (Max. %)	Observed value									
		Heat									
	Grade-B/ Class-2 of IS: 1875 or IS:2004	1	2	3	4	5	6	7	8	9	10
C	0.32										
Mn	0.90										
P	0.03										
S	0.03										
Si	0.60										

5. Microstructure of Grade 'B' Components : Sample size – three per lot from Lug/ Test Coupon

Specified	Observed	1	2	3	4	5	6	7	8	9	10
Ferrite- Pearlite	OK/ NOT OK										

6. Hardness : Sample size – 5% or min 5 nos. from CBC component

Grade	Specified value	Observed value									
	BHN No.	1	2	3	4	5	6	7	8	9	10
Grade B	137-208										


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 o=MINISTRY OF RAILWAYS,
 ou=MINISTRY OF RAILWAYS,
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Signature of Firm's Representative
M/s

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Research Designs & Standards Organization
Government of India, Ministry of Railways
Manak Nagar, Lucknow – 226011

7. Impact Test : Sample size – one per lot from CBC component
(Testing should be done as per ASTM A-370)

Specified	Observed value
2.07 Kg-M or 20.29 J (min) at -7 ⁰ C	

8. Heat Treatment:

Record of heat treatment to be verified as per clause 5.3.8 of Specification	OK/ NOT OK	
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9. Variation of Weight : 10% of lot

Specified value	Observed value
Within +5% to -3% of the drawing value (100% weight variation to be checked by firm internally and same is to be cross verified randomly. The copy of the same should be attached with check sheet)	<p style="text-align: center;">SANJAI JAUHRI</p> <p style="font-size: small;">Digitally signed by SANJAI JAUHRI DN: cn=SANJAI JAUHRI, c=IN, st=UTTAR PRADESH, o=MINISTRY OF RAILWAYS, ou=MINISTRY OF RAILWAYS, serialNumber=BFA8ACB6284 3589C066D112792EE235F608 99103726CF556BCA8FD2762E OFD4 Date: 2023.10.23 13:58:50 +05'30'</p>

10. Gauge check : As per RDSO Drawing (Sample size – 10% or min 10 nos)

COMPONENTS	Parameters	Gauge No.	Observation
Toggle, Universal Lock Lift Lever connector, Lock Lift Lever Hook & Knuckle Thrower	KNUCKLE THROWER CONTOUR	66-RC	
	KNUCKLE THROWER TRUNION	67-RC	
	LOCK LIFT ASSEMBLY	76-RC	
	COMPOSITE GAUGE FOR CONNECTER	77-RC	
	COMPOSITE GAUGE FOR HOOK	78-RC	
	COMPOSITE GAUGE FOR TOGGLE	79-RC	

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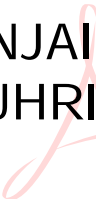
Inspecting Official of RDSO

2302542/2023/0/e ED/SW/RDSO



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Manak Nagar, Lucknow – 226011

11. Details of in-process inspection conducted by inspectors during this Purchase Inspections (At least one or two in-process inspection shall be done) :

Name of process inspection	Remarks (Give in details)
<p style="text-align: center;">  SANJAI JAUHRI </p>	<p>Digitally signed by SANJAI JAUHRI DN: cn=SANJAI JAUHRI, c=IN, st=UTTAR PRADESH, o=MINISTRY OF RAILWAYS, ou=MINISTRY OF RAILWAYS, serialNumber=BF5ABACB62843589C066D112792EE235F60B99103776CF556BCA8FD2762E0FD4 Date: 2023.10.23 13:59:08 +05'30'</p>

Signature of Firm's Representative
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