

	दक्षिण पूर्व मध्य रेलवे SOUTH EAST CENTRAL RAILWAY मंडल कार्यालय, कार्मिक विभाग, किंग्सवे, नागपुर-440001 Divisional Office, Personnel Department, Kingsway, Nagpur-440001		75 आज़ादी का अमृत महोत्सव
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No. P/NGP/CON/2021/20

Date: 02-11-2022

To,
All Concerned,
S.E.C. Railway, Nagpur.

Sub:- Publication of revised/corrected answer Key of written examination for selection to the post of Tech-III (EBS & Welder) in PML-2 against 25% LDCE Quota of Engineering Department.

Ref:- This office letter even no. dated 20-10-2022.

In connection to this office notification dated 12-07-2021, the written examination for selection of Tech-III (EBS & Welder) in PML-2 against 25% LDCE Quota of Engineering Department was conducted at Bhola High School, Motibagh on 16.10.2022 and as per extent provisions, Answer key of the aforesaid examination was published vide letter cited under reference for information and if required representations were invited within stipulated time.

In response to this, examination of Tech-III (Welder) post 03 individual representations & the examination of Tech-III (EBS) post 01 individual representation have been received by this office.

- In Tech-III (Welder) post against Q. No. 22,31,57,59,62,85,86,93 & 99.
- In Tech-III (EBS) post against Q. No. 58 & 65.

All the representations have been reviewed by Question Paper Setting Authority and it is decided as under:-

♦ **Tech-III (Welder)-** Answer of Q. No. 22, 31, 57, 86 & 99 will remain unchanged.

Q. No.	Answer as per existing answer key	After review, revised answer	Remarks
22	B	B	Not agreed with justification. As per Annexure-1, the answer is correct.
31	B	B	Not agreed with justification. As per Annexure-2, the answer is correct.
57	B	B	Not agreed. Question is from the course content only.
59	D	Cancelled	Question to be deleted and evaluation will be done as Estt. Rule No. 142/2022.
62	D	B	Agreed with justification given.
85	B	Cancelled	Question to be deleted and evaluation will be done as Estt. Rule No. 142/2022.
86	A	A	Not agreed with justification. As per Annexure-4, the answer is correct.
93	D	C	Agreed with justification given.
99	A	A	Not agreed with justification. As per Annexure-3, the answer is correct.

♦ **Tech-III (EBS)-**

Q. No.	Answer as per existing answer key	After review, revised answer	Remarks
58	D	B	Agreed with justification given.
65	B	A	Agreed with justification given.

The revised answer key is available on the website of SECR for perusal of the candidates. (secr.indianrailways.gov.in>Dept/Div of SECR/Division> Nagpur> Personnel>Answer Key). It may please be noted that representation will not be entertained against revised answer key.

Encl:- As above.


(Kamlesh Kumar R. Borkar)
Assistant Personnel Officer-III,
for Sr.DPO/SECR/NGP

Copy to:- Ch.OS/Engg. Cadre of Sr.DPO's office for information and it is advised to publish it widely amongst concerned staff.

for Sr.DPO/SECR/NGP

**Corrected Answer key to MCQ for the post of
Welder-III**

Q. no.	Answer
1	C
2	A
3	B
4	C
5	C
6	A
7	D
8	B
9	B
10	A
11	B
12	B
13	A
14	A
15	B
16	C
17	B
18	B
19	B
20	B
21	B
22	B
23	D
24	C
25	A
26	B
27	B
28	C
29	C
30	B
31	B
32	A
33	D
34	C
35	A
36	A
37	A
38	D
39	C
40	B

Q. no.	Answer
41	C
42	A
43	D
44	D
45	A
46	D
47	A
48	A
49	A
50	A
51	C
52	B
53	C
54	C
55	B
56	B
57	B
58	B
59	Cancelled
60	A
61	C
62	B
63	B
64	B
65	A
66	A
67	A
68	C
69	D
70	B
71	A
72	A
73	B
74	B
75	B
76	B
77	C
78	C
79	D
80	A

Q. no.	Answer
81	B
82	C
83	D
84	A
85	Cancelled
86	A
87	D
88	D
89	B
90	A
91	B
92	B
93	C
94	C
95	A
96	A
97	A
98	C
99	A
100	A
101	C
102	D
103	A
104	B
105	C
106	B
107	B
108	A
109	C
110	B

Chapter -2.1 --- Abrasive Rail Cutter

2.1.1 Use :

Abrasive rail cutter is used for - quick cutting of all types of rail sections including wear resistant, head hardened rails up to 110 UTS.

2.1.2 Description :

The machine comprises of petrol driven Engine, integrated with a cutting unit fitted with an abrasive disc.



Salient features:

- Prime mover : A petrol engine of about 7 HP at 7000 RPM .
- Fuel Tank Capacity : The fuel tank capacity shall be at least 1 litre, which shall be sufficient for at least 5 cuts in 52 kg 90 UTS rails.
- Overall weight : Maximum 35 kg.
- Tolerance : ± 1 mm both from vertical and lateral faces of railhead.
- No. of cuts per disc : Minimum 7 numbers of cuts on 52 Kg 90 UTS
- Cutting time :

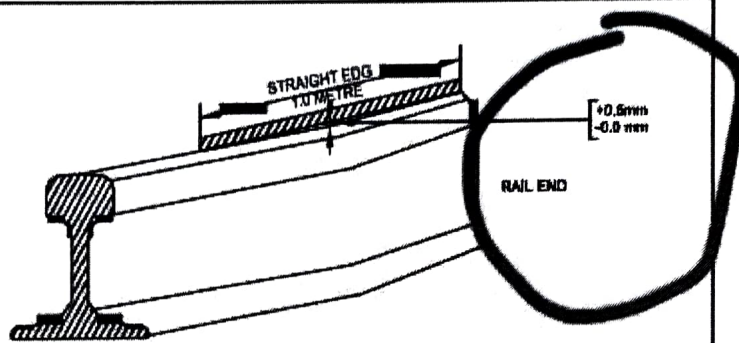
Rail		Recommended time in minutes
(i)	60 Kg/m, 110 UTS	5
(ii)	60 Kg/m, 90 UTS	4
(iii)	52 Kg/m, 90 UTS & other rails	3
(iv)	52 Kg/m, 72 UTS & other rails	2

2.1.3 Guidelines for using, handling, transporting and storing of machines.

2.1.3.1 Using :

Instructions contained in the manual supplied with the machine shall be followed for operation including operational safety measures, repair/maintenance, overhauling, trouble-shooting etc. In addition to the operational instructions contained in the manual given by the supplier, following instructions shall be observed before commencement of actual cutting:

- Inspect wheel for cracks or other damages.
- Test disc by striking lightly with a piece of wood. If the disc does not make a full ringing sound, it is damaged.
- Check the contact surfaces of cutter disc and ensure that flanges are flat and free of foreign material.



ELEVATION

FIG :3.1(a) TOLERANCE ON THE END BENDS IN THE VERTICAL PLANE

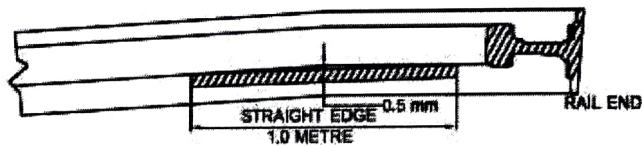
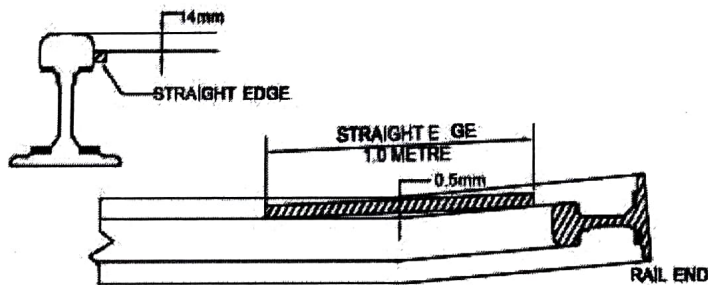


FIG :3.1(b) TOLERANCE ON THE END BENDS IN THE HORIZONTAL PLANE



PLAN

FIG :3.1(c) TOLERANCE ON THE END BENDS IN THE HORIZONTAL PLANE

ANNEXURE-4**MAJOR DEFECTS IN A.T. WELDING BECAUSE OF IMPROPER WELD EXECUTION**

S. No.	Type of defect	Cause of defect	Preventive steps to be taken to avoid the defect
1.	Longitudinal crack in rail web	Cutting of wear resistant grade rails by flame cutting.	Flame cutting of rail ends is prohibited due to likelihood of cracking in web
2.	Lack of fusion in rail foot	Flame cutting of rail ends.	When producing the welding gap, never flame cut rail ends without using a cutting guide.
3.	Cold spots-lack of fusion.	Gap between rail ends too wide-rail ends outside the collar formation	Maintain the welding gap between rail ends specified in the approved parameters of the technique. Never attempt to weld a gap which is too wide, with standard mould.
4.	Cold spot-lack of fusion and associated local porosity.	Mould fitted vertically but off center to the weld gap.	Take care to centralise the mould to the gap. Never try to fit both mould halves simultaneously.
5.	Lack of fusion on foot of one rail end.	Moulds fitted centre to the gap but inclined to the vertical.	Take care to fit mould both vertical and central to the weld gap. Do not incline mould to the vertical.
6.	Gross lack of fusion on	Standard moulds fitted to rails of dissimilar depth	Do not try to weld worn to new rail, or rails of dissimilar depth with standard mould.
7.	Porosity in the thermit steel	Luting sand too wet.	Luting sand must be moist but not too wet. Never use wet luting sand.
8.	Sand inclusion in the rail foot and sandburn across the rail head	Dropping of luting sand into the mould	Take care when sealing the mould with luting sand. It must not be allowed to drop into the mould.
9.	Gross porosity throughout the whole weld section	Use of damp crucible is detrimental to thermit reaction and results in gross porosity of weld metal.	Carefully dry out the crucible lining using the preheating burner.

S. No.	Classification	Painting on both faces of web	Action to be taken	Interim action
1.	IMR IMRW	Three cross with red paint	The flawed portion should be replaced by a sound tested rail piece of not less than 6m length within 3 days of detection.	SE/JE(P.Way)/USFD shall impose speed restriction of 30 Km/h or stricter immediately and to be continued till flawed rail/weld is replaced. He should communicate to sectional SE/JE(P.Way) about the flaw location who shall ensure that clamped joggled fish plate is provided within 24 hrs.
2.	OBS OBSW	One cross with red paint	Rail/weld to be provided with clamped joggled fish plate within 3 days. SE/JE(P. Way)/USFD to specifically record the observations of the location in his register in subsequent rounds of testing.	SE/JE(P. Way)/USFD to advise sectional SE/JE(P. Way) within 24 hrs about the flaw location. Keyman to watch during daily patrolling till it is joggled fish plated.

5. AT weld defect classification

6.5.1 Defects detected by 0° 4 MHz & 70° 2 MHz probes during through rail testing shall be classified in the same manner as mentioned in Para 2 of Annexure-II.

6.5.2 Defects detected by 0° 2MHz, 70° 2 MHz, 45° 2 MHz and 70° 2 MHz (8mmX8mm) probes with customized AT weld tester/existing machine shall be classified in accordance with provisions contained in Para 6.8.2.1.

6.6 Action to be taken after detection of defects in AT welds : Action to be taken for defects in AT welds shall be same as at para 6.4 and in addition following shall also be applicable for welds classified as defective (DFW) in periodic testing of AT welds with 0° 2MHz, 70° 2 MHz, 45° 2 MHz, 70° 2 MHz (8mmx8mm) probes:

Answer key to MCQ for the post of EBS-III

Q. no.	Answer
1	c
2	A
3	B
4	A
5	D
6	A
7	D
8	A
9	B
10	B
11	B
12	B
13	B
14	C
15	C
16	A
17	A
18	B
19	C
20	B
21	B
22	A
23	B
24	B
25	B
26	C
27	A
28	A
29	A
30	C
31	A
32	B
33	A
34	A
35	D
36	B
37	A
38	A
39	A
40	C

Q. no.	Answer
41	C
42	C
43	A
44	B
45	B
46	C
47	B
48	C
49	A
50	A
51	B
52	D
53	B
54	B
55	A
56	B
57	A
58	B
59	B
60	D
61	C
62	C
63	B
64	D
65	A
66	D
67	A
68	B
69	B
70	C
71	C
72	B
73	C
74	C
75	B
76	D
77	D
78	B
79	B
80	B

Q. no.	Answer
81	A
82	C
83	A
84	B
85	A
86	B
87	D
88	A
89	B
90	B
91	B
92	B
93	C
94	C
95	C
96	B
97	D
98	A
99	D
100	B
101	C
102	D
103	A
104	B
105	C
106	B
107	B
108	A
109	C
110	B