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No. CT/Welding/CDI

Dt.: 29.02.2016

प्रमुख मुख्य अभियन्ता

02-3

1. मध्य रेलवे, छत्रपति शिवाजी टर्मिनस (वी.टी.), मुम्बई-400 001
2. पूर्व रेलवे, फेयरली प्लेस, कोलकाता-700 001
3. उत्तर रेलवे, बड़ोदा हाउस, नई दिल्ली-110 001
4. पूर्वोत्तर रेलवे, गोरखपुर-273 012
5. दक्षिण रेलवे, पार्क टाउन, चेन्नई-600 003
6. दक्षिण मध्य रेलवे, रेल निलयम, सिकन्दराबाद-500 371
7. पश्चिम रेलवे, चर्च गेट, मुम्बई-400 020
8. दक्षिण पूर्वी रेलवे, गार्डन रीच, कोलकाता-700 043
9. उत्तर पूर्वी सीमांत रेलवे, मालीगाँव, गोहाटी-781 011
10. पूर्व मध्य रेलवे, हाजीपुर-844 101
11. पूर्व तटीय रेलवे, भुवनेश्वर-751 023
12. उत्तर मध्य रेलवे, इलाहाबाद-211 001
13. उत्तर पश्चिम रेलवे, जयपुर-302 006
14. दक्षिण पूर्व मध्य रेलवे, बिलासपुर-495 004
15. दक्षिण पश्चिम रेलवे, हुबली-580 023
16. पश्चिम मध्य रेलवे, जबलपुर-482 001

Sub: Approval of AT welding techniques for 52Kg (90UTS) rails and 60Kg (90UTS) rails using Compressed Air petrol pre-heating system, 3 piece Pre fabricated moulds (zircon-washed) manually pressed, Single shot crucible fitted with Automatic Tapping thimble developed by M/s Chakradhar Industries LLP, 1, Bhuvaneshwari Building, Shahaji Raje Road, Vile Parle (East), Mumbai

1. AT portion manufacturing plant for manufacturing and supply of A.T. Portions for AT welding technique for 52Kg (90UTS) rails and 60Kg (90UTS) rails using Compressed Air petrol pre-heating system, 3 piece Pre fabricated moulds (zircon-washed) manually pressed using Single shot crucible fitted with Automatic Tapping thimble developed by M/s Chakradhar Industries LLP, office address; 1, Bhuvaneshwari Building, Shahaji Raje Road, Vile Parle (East), Mumbai and work address Gala no. 12, Survey no. 134, Khan real Estate, Vasai Phata - Vasai ( East), Distt. Thane- 401208, Maharashtra has been found satisfactory on the basis of infrastructure verification, laboratory evaluation for 52Kg (90UTS) & 60Kg (90UTS) rails, fatigue test for 52Kg (90UTS) & field trials test results of 52Kg (90UTS) & 60Kg (90UTS) rail section as per IRS/T-19-2012.
2. Accordingly, the firm M/s Chakradhar Industries LLP, **office address;** 1, Bhuvaneshwari Building, Shahaji Raje Road, Vile Parle (East), Mumbai and **work address;** Gala no. 12, Survey no. 134, Khan real Estate, Vasai Phata - Vasai ( East), Distt. Thane- 401208, Maharashtra is approved for AT welding technique for 52 Kg (90UTS) rails and 60 Kg (90UTS) rails using Compressed Air petrol pre-heating system, 3 piece Pre fabricated moulds (Zircon washed manually pressed), Single shot crucible fitted with Automatic Tapping thimble in the list of Part II(Two) category of firms for five years w.e.f. 29.02.2016 as per clause 3.0 of Item Specific Guidelines of 'AT Welding portion and execution of rail joints' Rev 02 .
3. The welding parameters for above mentioned A.T. portion and welding techniques developed by M/s Chakradhar Industries LLP, 1, Bhuvaneshwari Building, Shahaji Raje Road, Vile Parle (East), Mumbai are given in Annexure - I

4. For current status of AT welding techniques and Works/ office address of the firm M/s Chakradhar Industries LLP, 'Master list of approved vendors' and it's A & C slips issued by Quality Assurance (Civil) Dte./RDSO may be referred to, which are available on RDSO' s web site [www.rdsso.indianrailways.gov.in](http://www.rdsso.indianrailways.gov.in).

संलग्न- उपरोक्त ।

(राजीव कुमार)  
निदेशक/रेलपथ  
कृते महानिदेशक/रेलपथ

मूल प्रति पर नही-

- ✓ Copy along with Annexure - I forwarded to M/s Chakradhar Industries LLP, office address; 1, Bhuvaneshwari Building, Shahaji Raje Road, Vile Parle (East), Mumbai. Firm is advised to approach ED/QA(Civil) for upgradation in the list of Part-I firm as per the criteria laid down in document no. TDG 0017, Rev, '2' or latest.

संलग्न- उपरोक्त ।

(राजीव कुमार)  
निदेशक/रेलपथ  
कृते महानिदेशक/रेलपथ

## Annexure-I

A. Welding parameters for AT portion and welding technique for **52 Kg (90UTS) rails** with Compressed Air Petrol pre-heating, three piece pre-fabricated mould (Zircon washed) and **Single shot crucible** fitted with Auto tapping thimble, developed by M/s Chakradhar Industries LLP (CDI), Mumbai.

|                               |  |
|-------------------------------|--|
| i) Rail gap                   | 25±1 mm  |
| ii) Pre-heating time          | 4.0 minutes  |
| iii) Tapping time             | 16-26 Sec. (using Single shot crucible fitted with Auto tapping thimble)                                     |
| iv) Type of mould             | Three piece Prefabricated mould Manually pressed. (Zircon washed)  |
| v) Heating technique & device | Compressed Air Petrol preheating from centre top with burner ( Air pressure: 0.08 -0.14 Kg/cm <sup>2</sup> ) |
| vi) Welding technique         | SKV process, Centre top pouring, Single shot crucible fitted with Auto tapping thimble                       |
| vii) Mould waiting time       | 5:30-6:30 (minutes: sec.)  |
| viii) Chipping device         | Double cutter weld trimmer, 15-20 Sec.   |
| ix) Weight of portion         | 11.200 Kg ± 0.25%.   |
| x) Weld metal dimensions:     |  |

|              | <u>Web</u>   | <u>Foot</u>  | <u>Bottom</u> |
|--------------|--------------|--------------|---------------|
| a) Width     | 42.6-44.8 mm | 42.6-46.4 mm | 48.6-51.8 mm  |
| b) Thickness | 6.0-7.5 mm   | 5.2-6.8 mm   | 8.2-9.9 mm    |

B. Welding parameters for AT portion and welding technique for **60 Kg (90UTS) rails** with Compressed Air Petrol pre-heating, three piece pre-fabricated mould manually pressed (Zircon washed) and **Single shot crucible** fitted with Auto tapping thimble, developed by M/s Chakradhar Industries LLP (CDI), Mumbai.

|                               |  |
|-------------------------------|--|
| i) Rail gap                   | 25±1 mm  |
| ii) Pre-heating time          | 5½ minutes   |
| iii) Tapping time             | 16-26 Sec. (using Single shot crucible fitted with Auto tapping thimble)                                   |
| iv) Type of mould             | Three piece Prefabricated mould manually pressed. (Zircon washed)  |
| v) Heating technique & device | Compressed Air Petrol preheating from centre top with burner( Air pressure: 0.10-0.14 Kg/cm <sup>2</sup> ) |
| vi) Welding technique         | SKV process, Centre top pouring, Single shot crucible fitted with Auto tapping thimble                     |
| vii) Mould waiting time       | 6:00-7:00 (minutes : sec.)   |
| viii) Chipping device         | Double cutter weld trimmer, 15-20 Sec.   |
| ix) Weight of portion         | 13.140 Kg ± 0.25%.   |
| x) Weld metal dimensions:     |  |

|              | <u>Web</u>   | <u>Foot</u>  | <u>Bottom</u> |
|--------------|--------------|--------------|---------------|
| a) Width     | 41.3-42.9 mm | 41.9-45.5 mm | 45.5-49.0 mm  |
| b) Thickness | 5.2-7.8 mm   | 4.6-6.6 mm   | 5.8-8.0 mm    |