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भारत सरकार-रेल मंत्रालय  
अनुसंधान अभिकल्प और मानक संगठन  
लखनऊ-226011  
Government of India - Ministry of Railways  
Research, Designs & Standards  
Organization, LUCKNOW - 226011

No. EL/3.2.61

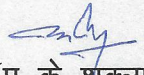
Dt. 16.08.2018

मैसर्स सेनाइडर इलेक्ट्रिक इन्फ्रास्ट्रक्चर लिमि0, माईलस्टोन 87, हलोल हाइवे, कोटाम्बी, बडोदरा - 391 510	मैसर्स बम्बार्डियर ट्रांसपोर्टेशन लिमि., इरडा रोड, मनेजा, बडोदरा-390 013.
मैसर्स ऑटोमीटर एलायंस लिमिटेड,सी - 63, सेक्टर - 57,नोयडा - 201 301	

**Sub:** Minutes of Meeting on reliability improvement of VCB at RDSO, Lucknow held on 10.08.2018.

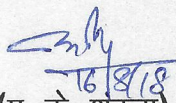
A meeting was conducted with representatives of Zonal Railways and VCB manufacturers at RDSO, Lucknow on 10.08.2018 on subject matter. In this regard, minutes of meeting is enclosed herewith for information and implementation by all concerned.

संलग्नक: यथोक्त।  
प्रतिलिपि:

  
(ए. के. शुक्ला)  
कृते महानिदेशक/विद्युत

- मुख्य विद्युत इंजीनियर,
  - मध्य रेलवे, मुम्बई सी.एस.टी - 400001
  - उत्तर रेलवे, बडोदा हाउस, नयी दिल्ली - 110001.
  - पूर्व रेलवे, फेयारली प्लेस, कोलकता - 700001.
  - दक्षिण रेलवे, पार्क टाउन, चेन्नई - 600003.
  - दक्षिण मध्य रेलवे, रेल निलायम, सिकन्द्राबाद - 500371.
  - पश्चिम रेलवे, चर्चगेट, मुम्बई - 400020.
  - दक्षिण पूर्व रेलवे, गार्डनरीच, कोलकता - 700043.
  - पश्चिम मध्य रेलवे, जबलपुर - 482001.
  - दक्षिण पूर्व मध्य रेलवे, बिलासपुर - 495004.
  - पूर्व मध्य रेलवे, हाजीपुर, बिहार - 844101
  - उत्तर मध्य रेलवे, सूबेदारगंज, इलाहाबाद - 211001.
  - पूर्व तटीय रेलवे, भुवनेश्वर - 751016
  - चित्तरंजन लोकोमोटिव वर्क्स, चित्तरंजन - 713331.

संलग्नक: यथोक्त।

  
(ए. के. शुक्ला)  
कृते महानिदेशक/विद्युत



**Minutes of Meeting on reliability improvement of VCB with Zonal Railways and VCB manufacturers held on 10.08.2018 at RDSO, Lucknow.**

**Members Present**

<b>A)</b>	<b>RDSO, Lucknow</b>	<b>D)</b>	<b>M/s BTIPL</b>
	Sh A K Shukla, EDSE		Sh Ghanshyam Gajjar, Elect. Design
	Yogesh Kumar, JE	<b>E)</b>	<b>M/s SEIL</b>
<b>B)</b>	<b>CLW</b>		Sh Santanu Banerjee, Man. Qual.
	Sh Sunil Singh Yadav, SEE/PP		Sh Samiran Dey, Sr. Man., Tech.
<b>C)</b>	<b>South Central Railway</b>		Sh Devendra Vishwakarma, Ser. head
	Sh K Chaitanya, ADEE	<b>F)</b>	<b>M/s AAL</b>
<b>D)</b>	<b>West Central Railway</b>		Sh D K Maharana, Product head
	Sh R Chandra, SSE		Sh Ved Prakash, Cus. Ser. Engineer
	Sh Shyam Babu, Technician-I		Sh Ankur Tiwari, A.M. Marketing
<b>E)</b>	<b>Western Railway</b>		Sh Sumit Wahi, Acc. Head
	Sh Pradeep Kr. Gupta, SSE		

A meeting on reliability improvements of VCB with Zonal Railways & VCB manufacturers held on 10.08.2018 at RDSO, Lucknow. Deliberations of the meeting and action plan are summarized as under:-

1. EDSE welcomed all the participants in the meeting from Zonal Railways & VCB manufacturers.

**Issues of M/s AAL, Noida**

1. ELS/ BRC of WR & ELS/ TKD of WCR proposed shifting of M/s Indfos make Pressure switch in new VCBs supplied by M/s AAL from existing position as due to jerk malfunctioning in few cases of pressure switch has been observed. M/s AAL shall look into the matter and do the needful.
2. Railways have reported that M/s AAL has incorporated M/s Festo make Pressure regulator in newly supplied VCBs. There is no interchangeability with existing Bachofen make Pressure regulator. Hence, M/s AAL shall look into the matter and do the needful for one to one replacement of the item.
3. Railways reported that M/s AAL has supplied new improved design VCBs for which they have not yet provided any AOH/ IOH/ POH kit for major overhauling work. Therefore, firm is advised to provide the Railways with AOH/IOH/POH kit as soon as possible for timely overhauling of their make VCBs.
4. There are 12 failures of VST short cases reported by Railways. Firm should investigate these cases and submit the report to RDSO within a fortnight with preventive action plan. Joint note of 6 cases of Tikiapara EMU car shed has been submitted by M/s AAL. However, joint investigation report of rest 06 nos. of VST short cases is yet to be submitted.

**Issues of M/s BTIL**

1. Out of total 30 failures reported by Railways, 11 cases reported are of Auxiliary switches even after the modification of CAM as per RDSO Letter no. EL/3.2.61/ BT dated 27.03.2014. M/s BTIL shall look into the matter and come up with action plan to arrest these failures of Auxiliary switches.




2. M/s BTIL stated that they have modified 195 switches, performance of which is awaited. Firm is advised to furnish the sl. no. of VCBs provided with these modified Auxiliary switches so that their performance could be monitored.

#### **Issues of M/s SEIL**

1. There has been large no. of failure cases of moisture ingress inside VCB reported by Railways. As per M/s SEIL, they have reduced the size of groove of bottom insulator from 5 mm to 4 mm for improvement of compression of O ring. Firm should submit the cut-in sl no. of VCB incorporated with this modification for monitoring of their performance. Further Firm should supply higher size O ring in maintenance kits to ensure proper compression in existing VCBs.
2. Firm has proposed to switch to new design VST, Parker make pressure regulator and rotex make magnet valve to arrest failure of VCB. CLW has given permission for limited use. Firm request for regular cut in should be considered by CLW.
3. Cases of VCB not closing has been reported by Railways. Firm shall take suitable action.
4. M/s SEIL is using 8 pole Auxiliary switches for as a result shed has to make an arrangement of self holding of VCB. M/s SEIL shall use 9 pole Auxiliary switch as per existing VCB specification.
5. ELS/BRC & ELS/TKD reported that M/s SEIL is using paper filter in PRVs which are getting choked even after short span of time. M/s SEIL should explore possibility of using phosphor bronze filter which are washable.
6. ELS/ TKD of WCR have reported flashing of Allen screw of VST top insulator which is a cause of serious concern. Therefore M/s SEIL is advised to visit ELS/TKD and take corrective/ preventive action for the same.

#### **Other Common Issues**

1. Few cases of moisture ingress observed in Pressure regulator of VCB. VCB manufacturers have suggested proper maintenance of air drier. RDSO has already issued an SMI for maintenance of air drier. All the sheds are advised to ensure the implementation of SMI no. 305 strictly.

  
(A.K. Shukla)  
EDSE/RDSO