

**APPROVAL OF ELECTRICAL APPARATUS & CABLES UNDER Regulation 181(3) of  
the COAL MINES REGULATIONS, 1957**

**The list of approved flameproof, intrinsically safe electrical equipment is not exhaustive  
and subject to verification of the approval documents.**

| Sl. No. | Description of equipments   | Name of Manufacturer (M/S)   | Approval no.        | Valid upto |
|---------|---|--|---------------------|------------|
| A1      | “Andrew Yule” make type Y-A 39/52/400 rated at 550 V, 10 MVA, 400 A & 3 phase, 50 Hz FLP air circuit breaker conforming to IS:2148-1981   | Andrew Yule & Co. Ltd., Electrical Division, Electrical Unit, 14, Mayurbhanj Road, Kolkata-700 023.      | 272 Group-I of 1985 | 14.09.2009 |
| A2      | FLP air break gate-end switch unit, type Y 70/B, rated at 150 A, 550 V, 3 phase, 50 cycles conforming to IS:2148-1981 & IS:5780-1980  | Andrew Yule & Co. Ltd., Electrical Division, Electrical Unit, 14, Mayurbhanj Road, Kolkata-700 023.      | 52 Group-I of 1971  | 31.10.2009 |
| A3      | FLP transwitch unit rated at 315 KVA with primary input upto 3300 V and secondary output 565 V, 3 phase, 50 Hz type-80/152 conforming to IS:2148-1981   | Andrew Yule & Co. Ltd., Electrical Division, Electrical Unit, 14, Mayurbhanj Road, Kolkata-700 023.      | 274 of 1986         | 24.08.2009 |
| A4      | Type-A 39/52, Circuit breaker panel rated at 100 A (maximum), 660 V, 3 phase, 50 Hz conforming to IS:2148-1981  | Andrew Yule & Co. Ltd., Electrical Division, Electrical Unit, 14, Mayurbhanj Road, Kolkata-700 023.      | 34 Group-I of 1972  | 06.05.2009 |
| A5      | Flameproof high voltage air circuit breaker type-FHT-1 rated at 3.3 KV, 300 A, 50 MVA, 3 phase, 50 Hz AC conforming to IS:2148-1981   | Andrew Yule & Co. Ltd., Electrical Division, Electrical Unit, 14, Mayurbhanj Road, Kolkata-700 023.      | 163 Group-I of 1978 | 03.05.2010 |
| ABC1    | FLP gate end box type-ABC/76/GEB rated upto 150 HP, 440/550 V, 3 phase, 50 Hz with cable sealing box and terminal chamber for incoming, isolator chamber with suitable mechanical interlock for front cover of the main chamber having ammeter with inspection window ‘start’-‘stop’ push buttons, earth leakage relay reset with | ABC Electrical Pvt. Ltd., 23A, Netaji Subhas Road, 10 <sup>th</sup> Floor, Room no. 44, Kolkata-700 001. | 131 Group-I of 1977 | 13.06.2009 |

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|      | inspection window conforming to IS:2148-1981 and IS:5780-1980  |  |                     |            |
| ABC2 | FLP air circuit breaker type-CB/84 rated upto and including 400 A, 550 V, 3 phase, 50 Hz conforming to IS:2148-1981  | ABC Electrical Pvt. Ltd., 23A, Netaji Subhas Road, 10 <sup>th</sup> Floor, Room no. 44, Kolkata-700 001.           | 263 of 1985         | 04.01.2010 |
| AVC3 | FLP lighting transformer upto 5 KVA, 440/550/110 V, type-ABC/76/LS-2   | ABC Electrical Pvt. Ltd., 23A, Netaji Subhas Road, 10 <sup>th</sup> Floor, Room no. 44, Kolkata-700 001.           | 133 Group-I of 1977 | 30.09.2009 |
| ABC4 | FLP drill control panel for coal drill type-ABC 75/DP rated upto and including 2.5 KVA, 550/125 V, 3 phase, 50 Hz with intrinsically safe pilot control circuit  | ABC Electrical Pvt. Ltd., 23A, Netaji Subhas Road, 10 <sup>th</sup> Floor, Room no. 44, Kolkata-700 001.           | 92 Group-I of 1975  | 30.09.2009 |
| ABC5 | Flameproof pull chord switch type-ABC-75/PC rated at 250 V AC, 3 A, 50 Hz of cast iron construction casing and boltless cover fitted with incoming and outgoing flameproof terminal box (detachable) and cable sealing box conforming to IS:2148-2004 and IS:13346-2004 for use in belowground Coal Mines  | ABC Electrical Pvt. Ltd., 23A, Netaji Subhas Road, 10 <sup>th</sup> Floor, Room no. 44, Kolkata-700 001.           | 121 Group-I of 1976 | 11.07.2009 |
| ABC6 | Flameproof automatic star-delta starter type ASDS/76 rated upto 250 HP, 500/550 V AC, 3 phase, 50 Hz with Ammeter and Voltmeter having cover window of toughened glass (6.5 mm) bearing identification mark "SAFEX" type A&C and with earth leakage and overload protection devices having incoming, outgoing and trunking arrangement with detachable cable sealing box and glands on the incoming and outgoing sides conforming to IS:2148-2004 and IS:13346-2004 for use in belowground Coal Mines. | ABC Electrical Pvt. Ltd., 23A, Netaji Subhas Road, 10 <sup>th</sup> Floor, Room no. 44, Kolkata-700 001.           | 126 Group-I of 1976 | 16.04.2009 |
| EK1  | Flameproof drill control panel rated at 2.5 KVA, 550/125 V, 3 phase, 50 Hz model-EXK-FLP/DP conforming to IS:2148-2004 & IS:13346-2004 for use belowground in coal mines.  | M/S Ex-Kburn Industries<br>IDA-29, Industrial Park<br>Opposite<br>Gouthaminagar<br>Fertilizer City :<br>Ramagundam | 522 of 2004         | 17.11.2009 |

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|    |  | Distt.-Karimnagar-505<br>210 (A.P.).  |                     |            |
| T1 | Intrinsically safe/FLP bell and bell transformer type-TG/BT/1 rated at 110/15, 440/440/15, 500/550/15 V  | Technogenics, 9, Rifle Range Road, Kolkata-700 019  | 2 Group-I of 1972   | 27.04.2010 |
| T2 | FLP pull chord switch type-ABC75/PC rated at 250 V AC, 3 A, 50 Hz of cast iron construction casing and boltless cover fitted with incoming and outgoing FLP terminal box (detachable) and cable sealing box  | Technogenics, 9, Rifle Range Road, Kolkata-700 019  | 121 Group-I of 1976 | 09.07.2010 |
| T3 | FLP 5 KVA lighting transformer type-TG/LT-5 rated at 550-440 V on primary & 110 V on secondary   | Technogenics, 9, Rifle Range Road, Kolkata-700 019  | 143 Group-I of 1977 | 20.10.2010 |
| T4 | Flameproof air circuit breaker type T6/ACB-1 rated upto and including 400 A, upto and including 660 V, 3 phase, 50 Hz with breaking capacity of 7.5 MVA  | Technogenics, 9, Rifle Range Road, Kolkata-700 019  | 147 Group-I of 1977 | 18.02.2010 |
| F1 | (i)Flameproof switch plug combined in cast iron casing type-FLP-RH-110 rated at 15 A, 500 V and (ii) flameproof upto 10 way (maximum) junction box in cast iron enclosure, type-FLP-RH-14 rated upto 100 A, 550 V AC conforming to IS:2148-2004 & IS:13346-2004 for use in belowground Coal Mines. | Flameproof Equipments Pvt. Ltd. Plot No.B-39 (Near Monginis) New Link Road, Andheri (W), Mumbai – 400 053.                | 323 of 1993         | 04.06.2009 |
| F2 | FLP push button station designated type FLP-RH-900 rated upto 15 A, 550 V, 50 Hz AC in cast iron construction conforming to IS:2148-2004 & IS:13346-2004 for use in belowground Coal Mines.  | Flameproof Equipments Pvt. Ltd., Plot no. B-39, New Link Road (Near Monginis Cake Factory) Andheri (West), Mumbai-400 053 | 325 of 1993         | 18.10.2008 |
| F3 | Flameproof/weatherproof junction box (4 way) type no. FLP-RH-01C rated at 60 A, upto 500 V AC or 15 A DC in cast iron enclosure conforming to IS:2148-2004 & IS:13346-2004 for use in belowground Coal Mines.  | Flameproof Equipments Pvt. Ltd. Plot No.B-39 (Near Monginis) New Link Road, Andheri (W), Mumbai – 400 053.                | 510 of 2004         | 12.06.2010 |
| M1 | Flameproof 1100 V, 300 A, plug & socket type-DV/R/PS-2 conforming to IS:2148-2004 & IS:13346-2004 for use in belowground Coal Mines.   | Mine Line Pvt. Ltd., 23, Indrani Park, Kolkata-700 033.   | 521 of 2004         | 17.11.2011 |
| M2 | Flameproof air break circuit breaker type  | Mine Line Pvt. Ltd.,  | 190 of              | 19.06.2010 |

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|-----|---|---|---------------------|------------|
|     | CB-1 redesignated as CB-6 rated at 100 A, 550 V, 3 phase, 50 Hz, 7.5 MVA breaking capacity conforming to IS:2148-2004 & IS:13346-2004 for use in belowground Coal Mines.                                    | 23, Indrani Park, Kolkata-700 033.                      | 1979                |            |
| M3  | Flameproof motor control panel type CP-5 rated at upto 32 A and upto 550 V, 3 phase, 50 Hz AC conforming to IS:2148-2004 & IS:13346-2004 for use in belowground Coal Mines.                                 | Mine Line Pvt. Ltd., 23, Indrani Park, Kolkata-700 033. | 300 of 1989         | 25.01.2010 |
| M4  | Flameproof switch box type JB-1 conforming to IS:2148-2004 & IS:13346-2004 for use in belowground Coal Mines.   | Mine Line Pvt. Ltd., 23, Indrani Park, Kolkata-700 033. | 297 of 1987         | 12.04.2010 |
| M5  | Flameproof direct-on-line contactor starter upto 50 HP, 660 V, 3 phase, 50 Hz type designated CP-1 conforming to IS:2148-2004 & IS:13346-2004 for use in belowground Coal Mines.                            | Mine Line Pvt. Ltd., 23, Indrani Park, Kolkata-700 033. | 169 Group-I of 1978 | 20.05.2010 |
| M6  | Flameproof bolted type plug & socket type DV/B/PS-1 rated at 200 A, 550/1100 V, 3 phase, 50 Hz AC conforming to IS:2148-2004 & IS:13346-2004 for use in belowground Coal Mines.                             | Mine Line Pvt. Ltd., 23, Indrani Park, Kolkata-700 033. | 296 of 1989         | 19.10.2009 |
| M7  | Bolted type FLP coupler and adaptor rated at 300 A, 3.3 KV, 3 phase, 50 Hz AC conforming to IS:2148-2004 and IS:13346-2004 for use in belowground coal mines.   | Mine Line Pvt. Ltd., 23, Indrani Park, Kolkata-700 033. | 69 of 1995          | 24.07.2010 |
| M8  | FLP control station type-FLP/CS-1 conforming to IS:2148-2004 and IS:13346-2004 for use in belowground coal mines.   | Mine Line Pvt. Ltd., 23, Indrani Park, Kolkata-700 033. | 295 Group-I of 1989 | 03.06.2010 |
| M9  | Flameproof high voltage type no. EX630 BV circuit breaker with vacuum contactor type VIB-150, 6600 V, 400 A, 3 phase, 50 Hz conforming to IS:2148-2004 and IS:13346-2004 for use in belowground coal mines. | Mine Line Pvt. Ltd., 23, Indrani Park, Kolkata-700 033. | 443 of 1995         | 16.05.2012 |
| M10 | FLP belt speed switch (belt switch) type BSS-65 rated at 220 V (max.) conforming to IS:2148-2004 and IS:13346-2004 for use in belowground coal mines.   | Mine Line Pvt. Ltd., 23, Indrani Park, Kolkata-700 033. | 441 of 1995         | 04.01.2010 |
| M11 | FLP restrained type plug & socket type-DV/R/PS-1 rated at 200 A, 550/1100 V, 3 phase, 50 Hz conforming to IS:2148-2004 and IS:13346-2004 for use in belowground coal mines.                                 | Mine Line Pvt. Ltd., 23, Indrani Park, Kolkata-700 033. | 298 Group-I of 1989 | 01.08.2010 |
| M12 | Flameproof DOL motor starter with vacuum contactor rated upto 180 KW, 6600 Volt, 3  | Mine Line Pvt. Ltd., 23, Indrani Park,                  | 448 of 1996         | 15.09.2009 |

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|------|--|---|-------------|------------|
|      | phase, 50 Hz, type no. EX630S manufactured by M/S Mine Line Pvt. Ltd., Kolkata conforming to IS:2148-2004 and IS:13346-2004 for use in belowground Coal Mines  | Kolkata-700 033.  |             |            |
| M13  | 1100 V, 250 A, DELTA flameproof boltless gate end box (with DVS 10 CB vacuum contactor) manufactured by M/S Mine Line Pvt. Ltd., Kolkata conforming to IS:2148-2004 and IS:13346-2004 for use in belowground Coal Mines  | Mine Line Pvt. Ltd., 23, Indrani Park, Kolkata-700 033.   | 451 of 1997 | 15.09.2011 |
| M14  | FLP transwitch unit, model no. 1900, 500 KVA, 6.6/1.1 KV or 550 V Delta/Star; DYn 11 with primary vacuum circuit breaker type Ex-630 BVTS (with contactor manufactured by reputed manufacturer and tested at CPRI) and LVCA FLP secondary chamber suitable for restricted neutral system | Mine Line Pvt. Ltd., 23, Indrani Park, Kolkata-700 033.   | 453 of 1997 | 11.04.2010 |
| M15  | Flameproof signaling transformer with bell rated at 110/15 V, single phase, 50 Hz, type-ST-1 with the 15 V outlet circuit being intrinsically safe conforming to IS:2148-2004 and IS:13346-2004 for use in belowground coal mines.   | Mine Line Pvt. Ltd., 23, Indrani Park, Kolkata-700 033.   | 166 of 1978 | 12.02.2010 |
| M16  | Flameproof cable coupler & adaptor rated upto 6.6 KV and upto 600 A, model no. R61/R62/R63 conforming to IS:2148-2004 and IS:13346-2004 for use in belowground coal mines.   | Mine Line Pvt. Ltd., 23, Indrani Park, Kolkata-700 033.   | 458 of 1999 | 10.07.2011 |
| SM1  | Gate End Box cum starter rated at 90 KW rated upto 550 V designated by type KSL-1 in mild steel fabricated FLP enclosure conforming to   | SAIT Mine Line Pvt. Ltd., 152, Harish Mukherjee Road, Kolkata-700 025.                                    | 504 of 2004 | 13.02.2009 |
| EEC1 | FLP pull cord switch type EPC-1 rated at 550 V, 10 A, 50 Hz single phase in cast iron construction conforming to IS:2148-2004 for use in belowground coal mines  | Electrical Equipment Corporation Plot No.314, Udyog Vihar, Phase-VI, Sector-37 Gurgaon-122 001 (Haryana). | 207 of 1981 | 24.08.2009 |
| EEC2 | FLP temperature switch in stainless steel construction, type EEC/FLP/TS-2002 conforming to IS:2148-2004 & IS:13346-2004 for use in belowground coal mines.   | Electrical Equipment Corporation Plot No.314, Udyog Vihar, Phase-VI, Sector-37 Gurgaon-122 001            | 513 of 2004 | 21.05.2011 |

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|------|--|--|------------------------|------------------|
|      |  | (Haryana).   |                        |                  |
| EEC3 | FLP float switch an stainless steel construction, type EEC/FLP/FS-2002 conforming to IS:2148-2004 & IS:13346-2004 for use in belowground coal mines.   | Electrical Equipment Corporation<br>Plot No.314, Udyog Vihar, Phase-VI, Sector-37<br>Gurgaon-122 001<br>(Haryana). | 514<br>2004            | of<br>21.05.2011 |
| EEC4 | FLP/WP audio visual alarm type-FLP/AVA/LT/SDL suitable for use with underground mobile machinery conforming to IS:2148-2004, IS:5780-2002 & IS:13346-2004 for use in belowground coal mines.   | Electrical Equipment Corporation<br>Plot No.314, Udyog Vihar, Phase-VI, Sector-37<br>Gurgaon-122 001<br>(Haryana). | 517<br>2004            | of<br>11.06.2011 |
| PS1  | Flameproof vacuum circuit breaker panel in mild steel/cast iron fabricated designated by type no. FLP VCB-01 rated upto 7.2 KV, 630 A, 13.1 KA manufactured by M/S Prabhu Switchgear Pvt. Ltd., Kolkata conforming to IS:2148-2004 and IS:13346-2004 for use in belowground Coal Mines | Prabhu Switchgear Pvt. Ltd., 1, Tarpan Ghat Road, Kolkata-700 053  | 502<br>2003            | of<br>23.12.2011 |
| PS2  | FLP transwitch unit type FLPTX-01 rated upto 500 KVA, 3.3 KV/1.1 KV with restricted earth neutral system and primary switch of 3.3 KV, 630 A, 13.1 KA vacuum circuit breaker having necessary protective devices   | Prabhu Switchgear Pvt. Ltd., 1, Tarpan Ghat Road, Kolkata-700 053  | 535<br>2005            | of<br>08.06.2010 |
| PI1  | FLP star delta starter type-FS II rated upto 100 A and upto 550 V, 3 phase, 50 Hz  | Prabhu Industrial Udyog Pvt. Ltd., 1, Tarpan Ghat Road, Kolkata-700 053  | 293<br>Group-I of 1989 | 18.07.2010       |
| PI2  | FLP air break star delta starter type FS-4 "Prabhu" make rated at and upto 600 A, upto 550 V, 3 phase, 50 Hz   | Prabhu Industrial Udyog Pvt. Ltd., 1, Tarpan Ghat Road, Kolkata-700 053  | 304<br>Group-I of 1990 | 18.07.2010       |
| PI3  | FLP air break star delta starter type FSIII, "Prabhu" make rated upto 300 A, upto 550 V, 3 phase, 50 Hz  | Prabhu Industrial Udyog Pvt. Ltd., 1, Tarpan Ghat Road, Kolkata-700 053  | 282<br>1987            | of<br>31.07.2010 |
| PI4  | Flameproof 3.3 KV, 400 A motor starter type FSHT-7   | Prabhu Industrial Udyog Pvt. Ltd., 1, Tarpan Ghat Road, Kolkata-700 053  | 475<br>2000            | of<br>02.07.2009 |
| PI5  | Flameproof drill control panel type DP-5 Prabhu brand rated upto 100 A, suitable for   | Prabhu Industrial Udyog Pvt. Ltd., 1,  | 316<br>1992            | of<br>21.07.2009 |

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|----|---|---|-------------|------------|
|    | 600 V, 3 phase, 50 Hz AC (primary) and 125 V, 3 phase, 50 Hz AC (Secondary) suitable for controlling 1.5 HP Coal Drill and intrinsically safe circuits  | Tarpan Ghat Road, Kolkata-700 053   |             |            |
| V1 | Flameproof DOL starter rated upto 50 HP, 550/1440 V, 3 phase, 50 Hz, size 1, type SF-1  | Volga Engineering Co. Pvt. Ltd., 1, Tarpan Ghat Road, Kolkata-700 053   | 175 of 1979 | 12.09.2009 |
| V2 | FLP air break switch gear type GBF-2 rated at 400 A, 550 V  | Volga Engineering Co. Pvt. Ltd., 1, Tarpan Ghat Road, Kolkata-700 053   | 473 of 2000 | 31.03.2010 |
| V3 | Flameproof 3.3 KV direct- on line starter rated upto 400 A, 3 phase, 50 Hz type HTF-3   | Volga Engineering Co. Pvt. Ltd., 1, Tarpan Ghat Road, Kolkata-700 053   | 486 of 2002 | 15.11.2009 |
| R1 | Flameproof resistance box for starting slipping motor, model no. RFRB 04 in mild steel construction designated by type air cooled, RV-600 V (max.), RA-80A (max.) resistance steps-7 to be fitted with slipping motor upto 250 KW, 550 V conforming to IS:2148-2004 and IS:13346-2004 for use in belowground Coal Mines | Rana Sales & Service Pvt. Ltd.<br>102, Industrial Area : Phase I<br>Panchkula-134 109 (Harayana).                   | 544 of 2006 | 20.04.2009 |
| R2 | Flameproof master drum controller, in mild steel construction designated by model no. RFDC-04 rated at RV-600 V(max.), RA-300 A(max.) to be fitted with slipping motor upto 250 KW, 550 V conforming to IS:2148-2004 and IS:13346-2004 for use in belowground Coal Mines  | Rana Sales & Service Pvt. Ltd.<br>102, Industrial Area : Phase I<br>Panchkula-134 109 (Harayana).                   | 545 of 2006 | 20.04.2009 |
| R3 | Flameproof liquid resistance controller (for slipping motor) in mild steel construction model no. RFLC-04 rated upto 150 KW, 550 V, SR motor, RV-600 V (max.), RA-200 A (max.) conforming to IS:2148-2004 and IS:13346-2004 for use in belowground Coal Mines   | Rana Sales & Service Pvt. Ltd.<br>102, Industrial Area : Phase I<br>Panchkula-134 109 (Harayana).                   | 561 of 2007 | 31.08.2009 |
| K1 | Flameproof Cable Reel Drum rated upto 1100 V & 300 A model no. KRD-1 with plug & socket model no. A&B conforming to IS:2148-2004 & IS:13346-2004 for use in belowground coal mines.   | Kaysons Techno Equipments Pvt. Limited<br>1802/7 : Phase-IV<br>GIDC Estate<br>Vithal Udyognagar – 388 121(Gujarat). | 525 of 2005 | 24.02.2012 |

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|----|--|--|-------------|----|------------|
| K2 | Flameproof isolator & control box rated upto 550 V, 400 A, type no. KIB-1 in steel/cast iron construction & fitted with certified cable glands conforming to IS:2148-2004 & IS:13346-2004 for use in belowground coal mines.                         | Kaysons Techno Equipments Pvt. Limited<br>1802/7 : Phase-IV<br>GIDC Estate<br>Vithal Udyognagar –<br>388 121(Gujarat). | 548<br>2006 | of | 21.04.2010 |
| K3 | Flameproof limit switch rated upto 650 V AC, 25 A, type no. KLS-A in steel/cast iron construction & fitted with certified cable glands conforming to IS:2148-2004 & IS:13346-2004 for use in belowground coal mines.                                 | Kaysons Techno Equipments Pvt. Limited<br>1802/7 : Phase-IV<br>GIDC Estate<br>Vithal Udyognagar –<br>388 121(Gujarat). | 547<br>2006 | of | 21.04.2010 |
| K4 | Flameproof/weatherproof junction box type no. KJB-A & B rated upto 650/1100 V AC & 25 A in cast iron construction conforming to IS:2148-2004 & IS:13346-2004 for use in belowground coal mines.  | Kaysons Techno Equipments Pvt. Limited<br>1802/7 : Phase-IV<br>GIDC Estate<br>Vithal Udyognagar –<br>388 121(Gujarat). | 537<br>2005 | of | 06.07.2009 |
| K5 | Flameproof plug & socket assembly rated upto 550 V AC, 300 A, type-A&B in steel/iron/brass conforming to IS:2148-2004 & IS:13346-2004 for use in belowground coal mines.   | Kaysons Techno Equipments Pvt. Limited<br>1802/7 : Phase-IV<br>GIDC Estate<br>Vithal Udyognagar –<br>388 121(Gujarat). | 546<br>2006 | of | 21.04.2010 |
| K6 | Flameproof/weatherproof temperature switch rated upto 240 V, 5 A, category no. KSWI-A in cast iron construction conforming to IS:2148-2004 & IS:13346-2004 for use in belowground coal mines.  | Kaysons Techno Equipments Pvt. Limited<br>1802/7 : Phase-IV<br>GIDC Estate<br>Vithal Udyognagar –<br>388 121(Gujarat). | 529<br>2005 | of | 12.04.2012 |
| K7 | Flameproof/weatherproof lighting transformer type-KLTI-A rated upto 400 VA, primary voltage upto 650 V and secondary voltage 110/24/12/7.5 V in cast iron construction conforming to IS:2148-2004 & IS:13346-2004 for use in belowground coal mines. | Kaysons Techno Equipments Pvt. Limited<br>1802/7 : Phase-IV<br>GIDC Estate<br>Vithal Udyognagar –<br>388 121(Gujarat). | 506<br>2004 | of | 13.02.2011 |
| K8 | Flameproof/weatherproof push button station type-KPBI-A in cast iron construction rated  | Kaysons Techno Equipments Pvt.   | 505<br>2004 | of | 13.02.2011 |

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|     | upto 10 A, 650 V with pilot core protection through diode and resistance for remote control of gate end box through pilot core of trailing cable conforming to IS:2148-2004 & IS:13346-2004 for use in belowground coal mines. | Limited<br>1802/7 : Phase-IV<br>GIDC Estate<br>Vithal Udyognagar –<br>388 121(Gujarat). |             |    |            |
| S1  | FLP power box unit rated at 550 V, 50 A, CI/MS construction type LT-01   | Safex (India),<br>Ashirwad Complex,<br>PO-Nagnagar,<br>Dhanbad-826 004                  | 508<br>2004 | of | 27.04.2010 |
| S2  | FLP restrained type plug & socket rated at 150 A, 550 V (max.) type-SI/PLG/150 in gunmetal/brass construction  | Safex (India),<br>Ashirwad Complex,<br>PO-Nagnagar,<br>Dhanbad-826 004                  | 462<br>1999 | of | 02.11.2009 |
| S3  | Flameproof restrained type plug and socket rated at 30 A, 125 V type SI/PLG/30 consisting of plug type-P&S-30 A and socket type P&S-30 brass construction  | Safex (India),<br>Ashirwad Complex,<br>PO-Nagnagar,<br>Dhanbad-826 004                  | 461<br>1999 | of | 21.01.2011 |
| S4  | Pull cord switch type no. PCS-01 in cast iron steel construction rated 10 A, 550 V   | Safex (India),<br>Ashirwad Complex,<br>PO-Nagnagar,<br>Dhanbad-826 004                  | 488<br>2003 | of | 31.01.2010 |
| S5  | Fluid status indicator switch type no. GSIS rated at 24 V with compound filled sealing box in cast steel construction  | Safex (India),<br>Ashirwad Complex,<br>PO-Nagnagar,<br>Dhanbad-826 004                  | 493<br>2003 | of | 05.05.2010 |
| S6  | FLP foot switch assembly type no. FSA rated at 16 A, 550 V in cast iron construction   | Safex (India),<br>Ashirwad Complex,<br>PO-Nagnagar,<br>Dhanbad-826 004                  | 495<br>2003 | of | 07.07.2010 |
| S7  | FLP power box unit type-SI/T/01 rated at 550/110/15 V AC in cast iron construction   | Safex (India),<br>Ashirwad Complex,<br>PO-Nagnagar,<br>Dhanbad-826 004                  | 326<br>1993 | of | 01.05.2010 |
| S8  | FLP/IS power supply unit rated at input of 24 V AC and output of 12 V DC in MS fabricated construction   | Safex (India),<br>Ashirwad Complex,<br>PO-Nagnagar,<br>Dhanbad-826 004                  | 332<br>1994 | of | 26.04.2010 |
| S9  | FLP/WP push button station type PB-330 series in cast iron rated at 16 A, 550 V  | Safex (India),<br>Ashirwad Complex,<br>PO-Nagnagar,<br>Dhanbad-826 004                  | 474<br>2000 | of | 24.07.2010 |
| S10 | FLP & IS “SAFEX” make junction box cum lighting and signaling unit type MLT rated at 550/440 V AC upto 1 KVA, 550/110 V lighting transformer and 25 VA, 550/15   | Safex (India),<br>Ashirwad Complex,<br>PO-Nagnagar,<br>Dhanbad-826 004                  | 449<br>1997 | of | 19.10.2009 |

|     |   |   |                     |            |
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|     | Vintrinsically safe signaling transformer 50 Hz in mild steel construction  |   |                     |            |
| S11 | Intrinsically safe signaling bell and bell transformer  | Safex (India), Ashirwad Complex, PO-Nagnagar, Dhanbad-826 004   | 445 of 1996         | 18.06.2010 |
| S12 | Flameproof composite power box unit with built start/stop provision for the operation of SDL/LHD machine alongwith audio visual alarm actuation and machine running hour indicator type LT-02   | Safex (India), Ashirwad Complex, PO-Nagnagar, Dhanbad-826 004   | 541 of 2006         | 25.01.2010 |
| FU1 | Flameproof gate end box model no. GEB-01, 150 A, 550 V, 3 phase, 50 Hz manufactured by M/s Flameproof Udyog Pvt. Ltd., Bilaspur with DGMS approved 151 A plug and socket of M/s Safex (India), Dhanbad and intrinsically safe pilot circuit type SI-PC-01 of M/S Safex (India), Dhanbad conforming to IS:2148-2004, IS:13346-2004 & IS:5780-2002 for use in belowground coal mines. | Flameproof Udyog Pvt. Ltd., Sector-B, Plot no. 106, Sirgitti Industrial Area, Bilaspur-495 223 (Chhatisgarh). | 563 of 2007         | 19.11.2008 |
| FU2 | Flameproof drill panel model no. DP-01, 2.5 KVA, 550/125 V, 3 phase, 50 Hz manufactured by M/S Flameproof Udyog Pvt. Ltd., Bilaspur with DGMS approved 30 A plug and socket of M/s Safex (India), and intrinsically safe pilot circuit type SI-PC-01 of M/S Safex (India), Dhanbad conforming to IS:2148-2004, IS:13346-2004 & IS:5780-2002 for use in belowground coal mines.      | Flameproof Udyog Pvt. Ltd., Sector-B, Plot no. 106, Sirgitti Industrial Area, Bilaspur-495 223 (Chhatisgarh). | 562 of 2007         | 19.11.2008 |
| IS1 | Flameproof contactor type control panel designated type-SF200 rated at 100 HP, 550 V, 3 phase, 50 Hz for starter protection duty  | Industries Syndicate, 7, Chittranjan Avenue, Laha Paint House, P B no. 13324, Kolkata-700 072                 | 256 Group-I of 1984 | 29.04.2009 |
| IS2 | Flameproof rotor resistance type "FR2" for 3 phase slipping induction motor rated at 50 HP, 660 V, 50 Hz, 5 minute, provided with integral common terminal box for incoming and outgoing and cast iron cable sealing boxes and glands type "FR50" conforming to IS:2148-2004 and IS:13346-2004 for use in belowground Coal Mines  | Industries Syndicate, 7, Chittranjan Avenue, Laha Paint House, P B no. 13324, Kolkata-700 072                 | 130 Group-I of 1977 | 29.01.2010 |
| IS3 | Flameproof drum controller in mild steel construction type "FD50" rated for 120 A, upto 660 V, 50 Hz, 3 phase for controlling   | Industries Syndicate, 7, Chittranjan Avenue, Laha Paint House, P B  | 129 Group-I of 1977 | 29.01.2010 |

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|-----|---|---|-------------------------|------------|
|     | slipping induction motor provided with integral common terminal box for incoming and outgoing and cast iron cable sealing boxes and glands conforming to IS:2148-2004 and IS:13346-2004 for use in belowground Coal Mines   | no. 13324, Kolkata-700 072  |                         |            |
| IS4 | Flameproof electro-hydraulic thruster with integral motor type-TTF33250 rated upto 1130 V, 3 phase, 50 Hz thrust 150 Kg & 100 mm stroke in cast iron construction conforming to IS:2148-2004, IS:12063-1987 and IS:13346-2004 for use in belowground Coal Mines   | Industries Syndicate, 7, Chittranjan Avenue, Laha Paint House, P B no. 13324, Kolkata-700 072                     | 283 Group-I of 1987     | 20.09.2010 |
| AW1 | Type SW-202, starter, 112 HP, 1100 V, 3 phase, 50 Hz  | Allenwest Wallacetown Ltd., 66 Third Avenue, Heatherhouse, Industrial Estate, Irvine : KA128 HN, UK               | 481 of 2002             | 01.02.2009 |
| AW2 | FLP gate end box type A67 rated at 300 A, 1100 V, 3 phase, 50 Hz  | Allenwest Wallacetown Ltd., 66 Third Avenue, Heatherhouse, Industrial Estate, Irvine : KA128 HN, UK               | 27/EHQ dated 04.01.1988 | 25.11.2008 |
| AW3 | FLP lighting transformer gate end unit type-D68 rated at 5 KVA (maximum), 1100/125 V or 250 V, 50 Hz single phase   | Allenwest Wallacetown Ltd., 66 Third Avenue, Heatherhouse, Industrial Estate, Irvine : KA128 HN, UK               | 20/EHQ dated 04.01.1988 | 21.04.2009 |
| AW4 | Flameproof transformer with 6.6 KV primary windings and 1.1 KV secondary winding rated at 1.5 MVA, 50 Hz, Delta/Star connected, Vector Group Dyn11, type AW2000/INT4, mounted with 6.6 KV vacuum circuit breaker unit type AW2000/E10 (EExd) manufactured by M/S Allenwest Wallacetown Limited, 66 Third Avenue Heatherhouse Industrial Estate, Irvine KA128HN, United Kingdom conforming to IS:2148-1981 for use in belowground Coal Mines in India. | Allenwest Wallacetown Limited, 66,Third Avenue, Heatherhouse Industrial Estate, Irvine KA 12 8HN, United Kingdom. | 578 of 2009             | 26.02.2010 |

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| E1  | FLP vacuum circuit breaker rated 3.3 KV, upto 440 A, type-FCB   | Electroteknica, KMC 128, Bosepukur, Prantik Pally, Kolkata-700 042                    | 520 of 2004         | 18.10.2009 |
| E2  | FLP DOL starter (reversing), type-F DOL rated at 175 HP, 440/550 V  | Electroteknica, KMC 128, Bosepukur, Prantik Pally, Kolkata-700 042                    | 491 of 2003         | 22.04.2010 |
| E3  | Flameproof air circuit breaker type-FACB/03 rated at 440/550 V, 300 A   | Electroteknica, KMC 128, Bosepukur, Prantik Pally, Kolkata-700 042                    | 490 of 2003         | 07.04.2010 |
| E4  | Flameproof air circuit breaker type-FACB/04 rated at 440/600 V, 400 A in fabricated mild steel enclosure  | Electroteknica, KMC 128, Bosepukur, Prantik Pally, Kolkata-700 042                    | 498 of 2003         | 26.09.2010 |
| E5  | Flameproof drill control panel rated at 1.5/2.5 KVA, 550/110/125 V, type-ET/DCP conforming to IS:2148-2004 & IS:13346-2004 for use in belowground coal mines.   | Electroteknica, KMC 128, Bosepukur, Prantik Pally, Kolkata-700 042                    | 512 of 2004         | 22.03.2011 |
| ES1 | FLP vacuum circuit breaker panel type F-VIB/01 rated at 3.3 KV, 630 A, 13.1 KA  | Electroteknica Switchgears Pvt. Ltd., 1/5 A&B, Raja Basanta Roy Road, Kolkata-700 026 | 470 of 2000         | 15.12.2009 |
| ES2 | FLP vacuum circuit breaker panel type F-VCB/01 rated at 6.6 KV, upto 630 A, 18.4 KA   | Electroteknica Switchgears Pvt. Ltd., 1/5 A&B, Raja Basanta Roy Road, Kolkata-700 026 | 482 of 2002         | 03.05.2010 |
| ES3 | FLP transwitch unit type no. F-Transwitch 101, 315 KVA, 3300/600-400 V with FLP primary vacuum breaker type VIB-150 and FLP secondary chamber suitable for earth neutral or restricted neutral system | Electroteknica Switchgears Pvt. Ltd., 1/5 A&B, Raja Basanta Roy Road, Kolkata-700 026 | 446 of 1996         | 18.06.2010 |
| EM1 | Flameproof direct-on-line starter type-MC-1 rated at 30 HP, 550 V, 3 phase conforming to IS:2148-2004 for use in belowground coal mines.  | Electro-Mine, 25, Chanditala Branch Road, Kolkata-700 053                             | 261 Group-I of 1983 | 09.10.2009 |
| EM2 | FLP air-cooled lighting transformer type LTU-1 of capacity 517 KVA, primary 660/550/380 V, secondary 110/125 V, single phase, 50 Hz AC conforming to IS:2148-2004 for use in belowground coal mines.  | Electro-Mine, 25, Chanditala Branch Road, Kolkata-53                                  | 266 Group-I of 1985 | 19.08.2009 |
| EM3 | Flameproof signaling transformer rated at 550/110/15 V, type IST-1 and intrinsically  | Electro-Mine, 25, Chanditala Branch   | 237 Group-I of      | 26.06.2009 |

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|      | safe signaling bell type ISB-1 rated at 15 V conforming to IS:2148-2004 for use in belowground coal mines.  | Road, Kolkata-53  | 1983                |  |            |
| AC1  | Flameproof float switch assembly model FS-01 for use in belowground coal mines conforming to IS:2148-2004 & IS:13346-2004 for use in belowground coal mines.                                  | Automation Controls 204, Bhiwapurkar Chambers Dhantoli : Nagpur-440 012.  | 496 of 2003         |  | 20.08.2010 |
| AC2  | Flameproof temperature switch model TS-01/1 for use in belowground coal mines conforming to IS:2148-2004 & IS:13346-2004 for use in belowground coal mines.                                   | Automation Controls 204, Bhiwapurkar Chambers Dhantoli : Nagpur-440 012.  | 497 of 2003         |  | 20.08.2010 |
| AC3  | Flameproof switch assembly model SW-01 for use in belowground coal mines conforming to IS:2148-2004 & IS:13346-2004 for use in belowground coal mines.  | Automation Controls 204, Bhiwapurkar Chambers Dhantoli : Nagpur-440 012.  | 500 of 2003         |  | 28.10.2010 |
| EE1  | Flameproof plug & socket in brass and gunmetal construction, rated at 1100 V AC, 200 A designated by type:EPO-1 conforming to IS:2148-2004 & IS:13346-2004 for use in belowground Coal Mines. | Eimco Elecon (India) Ltd., Anand Sojitra Road, Vallabh Vidyanagar-388 120 (Gujarat).                                    | 570 of 2008         |  | 29.05.2009 |
| EEE1 | Flameproof/weatherproof push button station/junction box model-EEEL 100 conforming to IS:2148-2004 & IS:13346-2004 for use in belowground Coal Mines.   | Eimco Elecon Electricals Ltd., C/o Eimco Elecon (India) Ltd., Anand Sojitra Road, Vallabh Vidyanagar-388 120 (Gujarat). | 571 of 2008         |  | 21.07.2009 |
| SP1  | Rana rotary coal drill type Rana CD/2 (modified version) rated at 110/125 V, 3 phase, 50 Hz, 1.5 HP (1.1 KW)  | Suraj Plant & Equipment Corporation 157, Phase-II, Industrial Area, Chandigarh-160 002                                  | 270 of 1985         |  | 28.03.2010 |
| AB1  | FLP 3.3 KV, 300 A, cable half coupler with straight adaptors conforming to IS:2148-1981   | A Bond Strands, No. 164, Developed Plot, Instronics Campus, Phase-II, Perungudi, Chennai-600 096                        | 186 Group-I of 1979 |  | 01.12.2009 |
| C1   | Hand-held electric flameproof coal drill type 'Chanda' model 'B' in MS fabricated   | Chanda & Co. (Engg.) Pvt. Ltd.  | 519 of 2004         |  | 16.09.2011 |

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|        | enclosure and rated at 1.5 HP, 125 V, 3 phase, 50 Hz, 2 poles, 300/480/600 RPM (with gears) conforming to IS:2148-2004 and IS:13346-2004 for use in belowground Coal Mines   | 3/1B : Mahendra Road<br>Kolkata-700 025.   |             |            |
| D1     | Flameproof/weatherproof intrinsically safe Power Supply unit model-DEP 110-12-1A/17AH/EPB manufactured by M/S Dynapro Motion Controls Pvt. Ltd., Nagpur conforming to IS:2148-2004, IS:5780-2002 and IS:13346-2004 for use in belowground Coal Mines.  | Dynapro Motion Controls Pvt. Ltd., W-64, MIDC Hingna Industrial Area Nagpur-440 016 (Maharashtra). | 575 of 2008 | 19.09.2009 |
| D2     | Hydraulic mechanized drilling machine for hydraulic Roof & Face Drilling manufactured by M/S Dynapro Motion Controls Pvt. Ltd., Nagpur with Laxmi Hydraulics make flameproof squirrel cage induction motor rated at 10 HP, 550 V, 3 phase, frame size LF-132 M with approved type plug & socket assembly conforming to IS:2148-2004 and IS:13346-2004 for use in belowground Coal Mines. | Dynapro Motion Controls Pvt. Ltd., W-64, MIDC Hingna Industrial Area Nagpur-440 016 (Maharashtra). | 582 of 2009 | 29.04.2010 |
| A T&D1 | Flameproof vacuum circuit breaker rated at 3.6 KV, 400 A with over currents earth leakage & short circuit protective devices type VSF-M with magnetic actuator conforming to IS:2148-2004 & IS:13346-2004 for use in belowground Coal Mines  | Areva T&D India Ltd. Block BN, Sector-V, Salt Lake City Kolkata-700 091.                           | 511 of 2004 | 22.03.2011 |