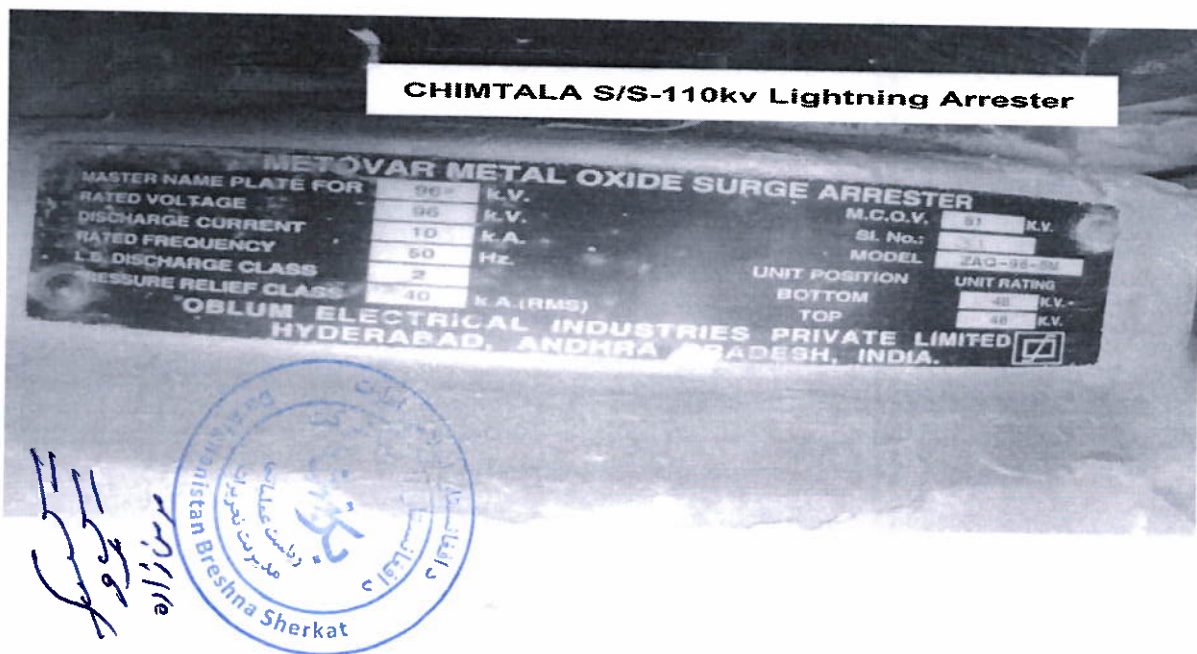
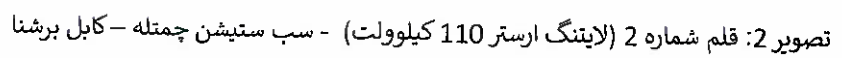
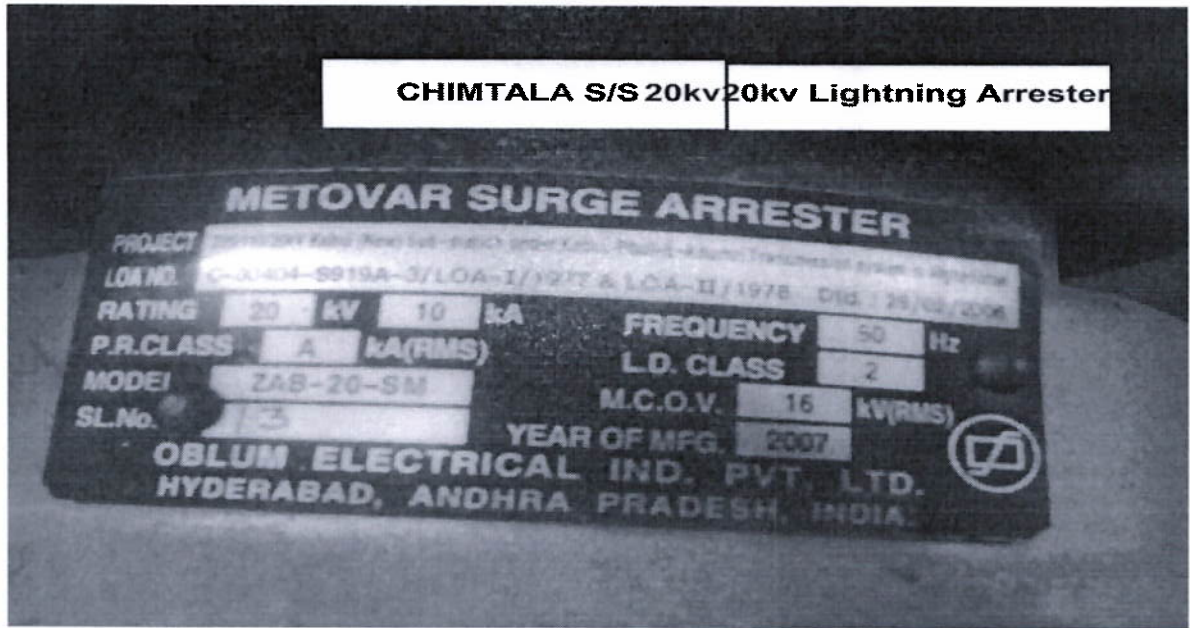


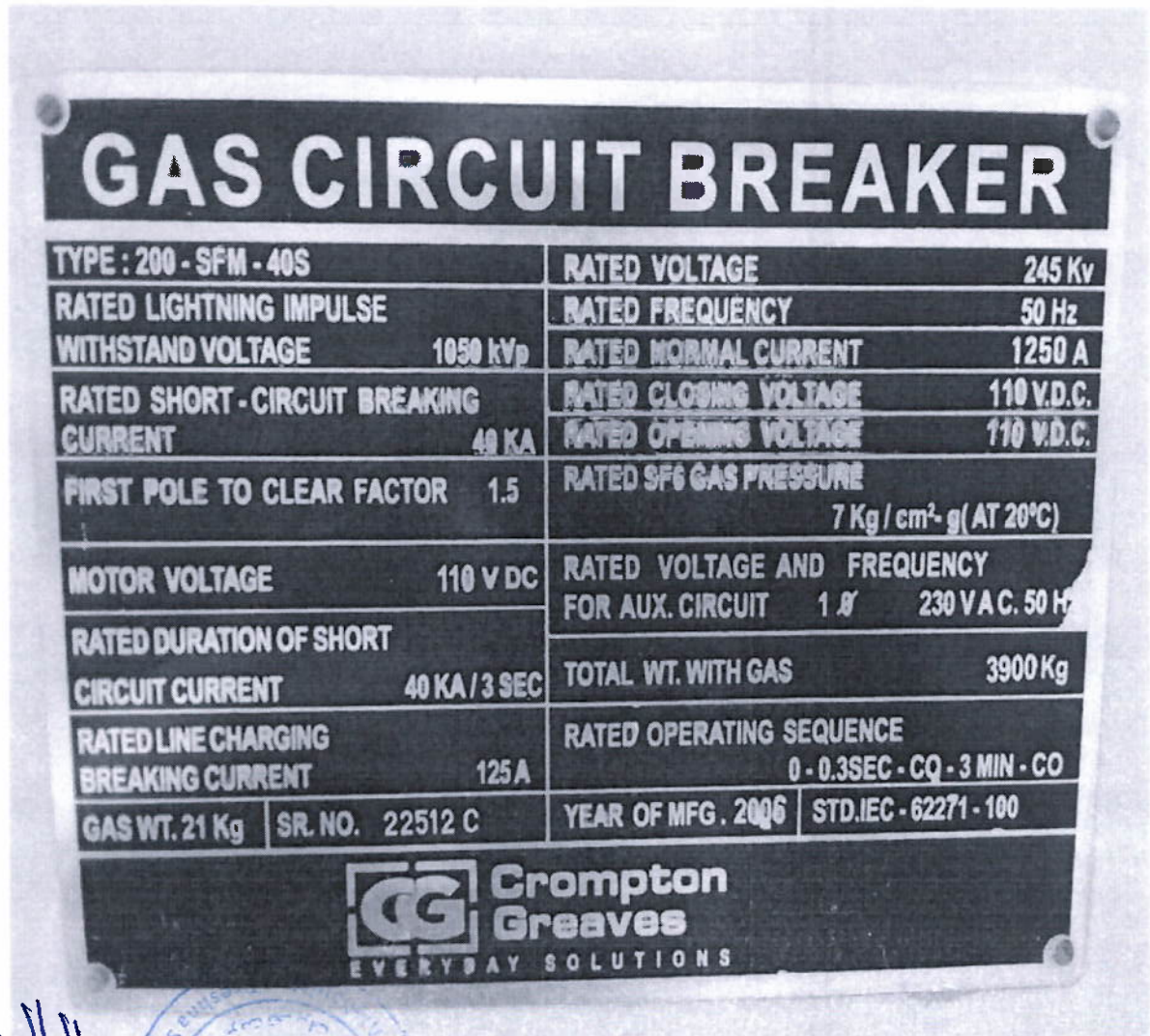
تصویر 1: قلم شماره 1 (پول سرکت بریکر گاز Sf6 245kV Complete pole for Circuit breaker - سب سٹیشن چمٹلہ - کابل ہرشنا



تصویر 3: قلم شماره 3 (لایتنگ ارستر 20 کیلوولت) - سب ستیشن چمتله - کابل برشنا



تصویر 4: قلم شماره 4 سرکت بریکر گازی 220 کیلوولت - سوچ ستیشن نائب آباد - بلخ برشنا



6/18

Handwritten signature and a circular official stamp are visible at the bottom left of the page.

[illegible]

Damqu1

 $\frac{7}{8}$

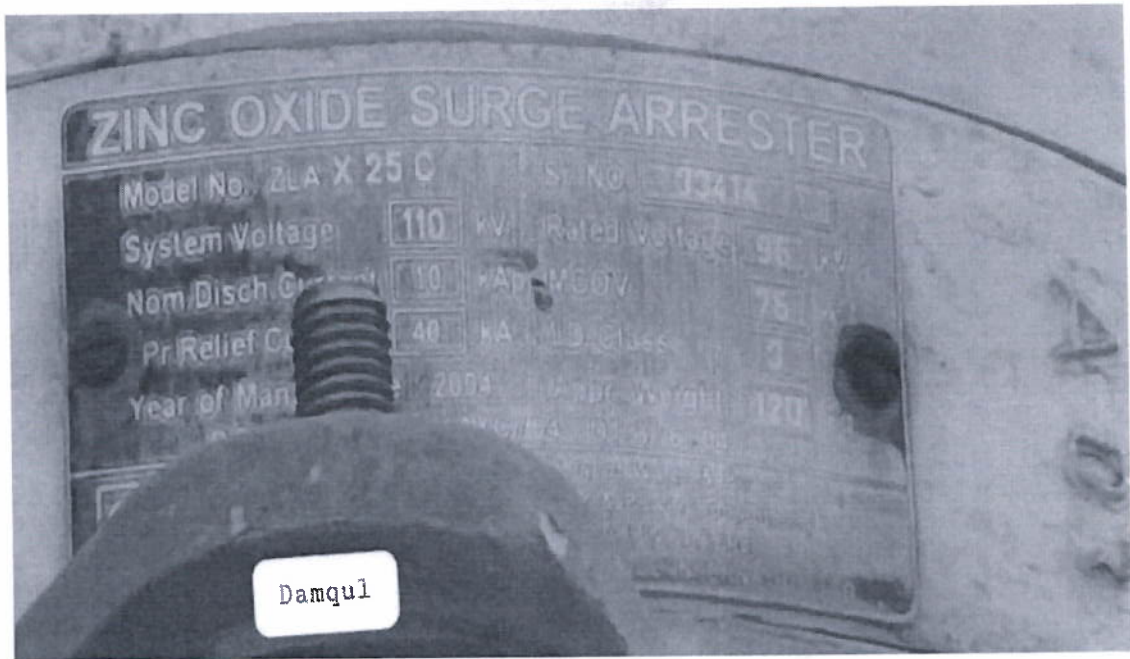
Brooklyn Mass

11/11/11

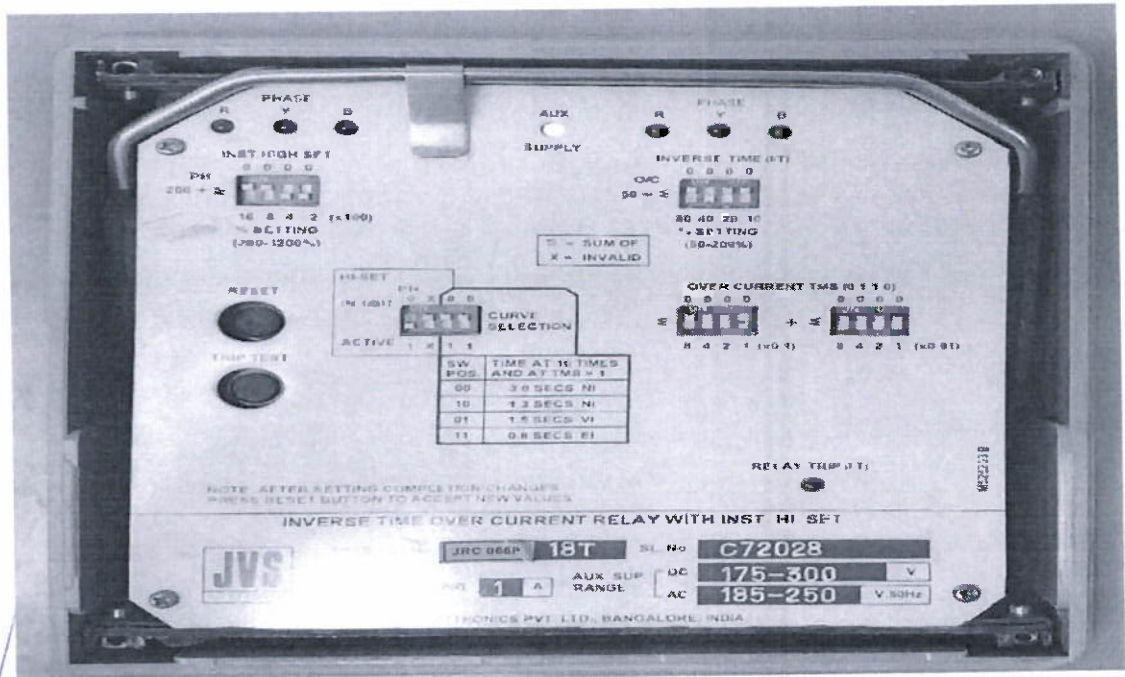
مردمان



تصویر 7: قلم شماره 7 (Lighting Arrester 110kv) - سب ستیشن شیرین تگاب - فاریاب برشنا

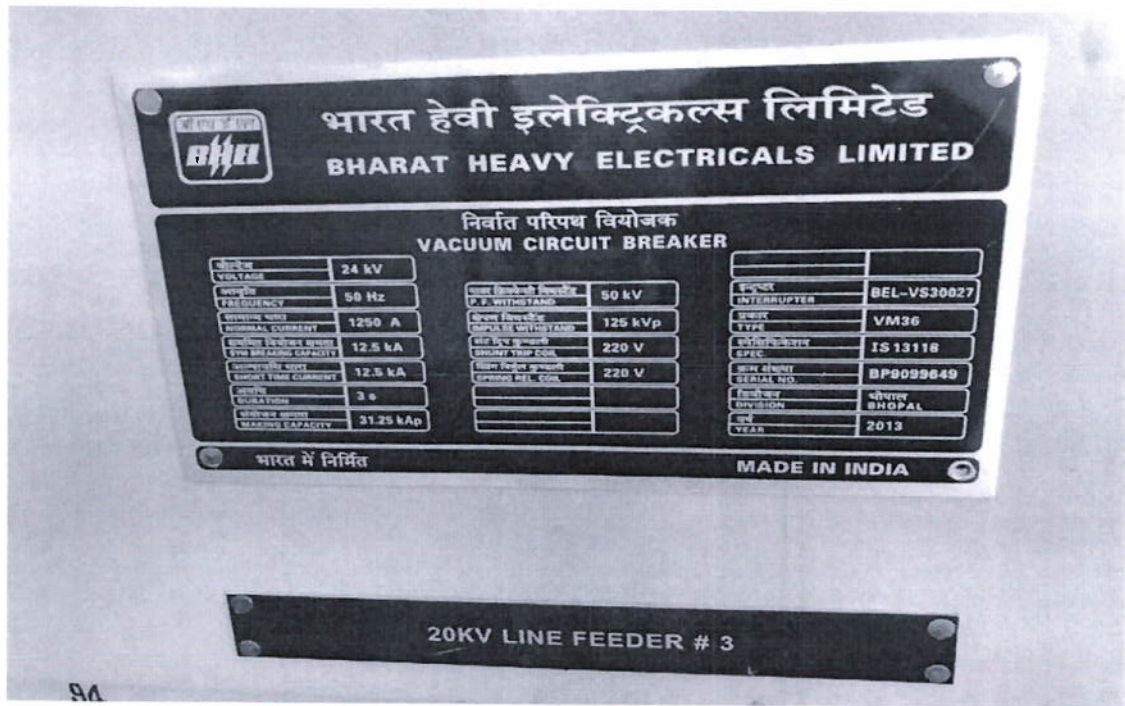


تصویر 8: قلم شماره 8 (ریلی محافظوی دیجیتل 50/51 IDMT 3 O/C relay - سب ستیشن چمتله - کابل برشنا

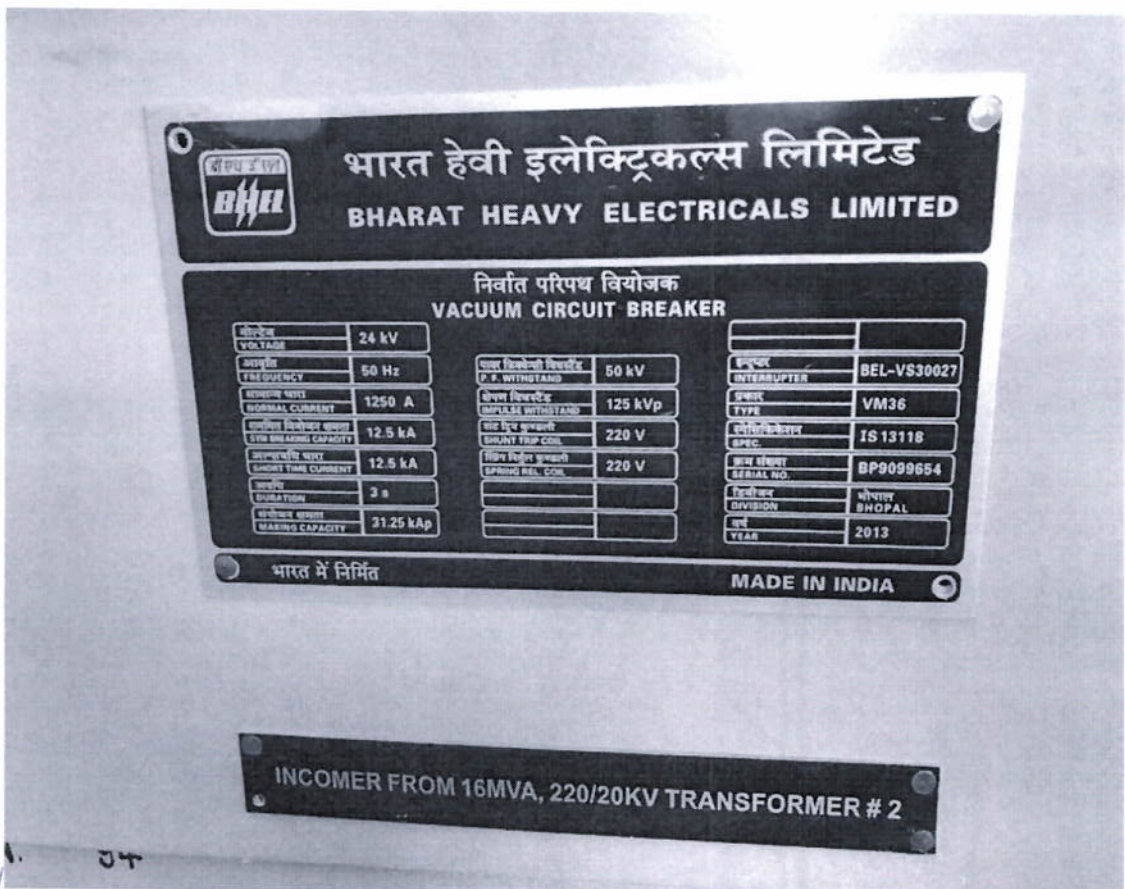


8/18
Available
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سید
شیرین
تگاب
فاریاب
برشنا

تصویر 9: قلم شماره 9 (Outgoing feeder circuit breaker) سب ستیشن پشته سرخ - پروان برشنا



تصویر 10: قلم شماره 12 (Incoming Feeder circuit breaker) سب ستیشن پشته سرخ - پروان برشنا



تصویر 11: قلم شماره 11 (Current Transformer 220kV) سب ستیشن پشته سرخ - پروان برشنا

भारत हेवी इलेक्ट्रिकल्स लिमिटेड, झांसी
BHARAT HEAVY ELECTRICALS LIMITED, JHANSI

धारा परिणामित्र **CURRENT TRANSFORMER**

मानक STANDARD	IS-2705	निर्धारित प्रथमिक धारा लैंग्वर RATED PRIMARY CURRENT AMP	1800
उच्चतम तन्त्र वोल्टेज कि. वी. HIGHEST SYSTEM VOLTAGE kV	245	EXTENDED CURRENT AMP	120%
विद्युत रोधन स्तर कि. वी. INSULATION LEVEL kV	480/1050	आंतरिक वर्तमान INTERNAL CURRENT	24771051189
आवृत्ति FREQUENCY हर्ट्ज Hz	50	वोल्टेज (विनिर्देश) VOLTAGE (SPECIFICATION)	640024
अल्पकालिक धारा कि. वी. SHORT TIME CURRENT kA	40 FOR 1 SEC.	अवस्था (विनिर्देश) DIVISION	40/1/70
		निर्माण वर्ष MFG. YEAR	80/11/JHANSI
		CT SUITABLE ABOVE NAIL	1800 MTRS

सावधानी : 1. भार विद्युत करने से पूर्व द्वितीयक टर्मिनल को अवस्था में लक्ष्य करने।
2. जबकि गुणक परीक्षण सम्पन्न हो न 2705 जब परीक्षणित प्रयोगित हो।

CAUTION : 1. SECONDARY TERMINALS MUST BE SHORT CIRCUITED BEFORE THE BURDEN IS DISCONNECTED.
2. POWER FACTOR TESTING TERMINALS SHOULD NOT BE OPENED WHILE TRANSFORMER IS ENERGISED.

द्वितीयक टर्मिनल विन्यास
SECONDARY TERMINALS ARRANGEMENT

टर्मिनल TERMINALS	अनुपात RATIO	विनिर्देश CLASS	रेटिंग RATING	वोल्टेज / एम्पियर / इम्पेडेंस K.V. / EX. AMP. / ATVS / SEC. OHMS AT 75°C	वैद्युत रोधन INSULATION LEVEL
151-152	800/1	P5	0.25 100VA	800V / 50 mA / 8 Ω	PROTECTION
151-153	1600/1	P5	0.25 100VA	1600V / 25 mA / 8 Ω	PROTECTION
251-252	800/1	P5	0.25 100VA	800V / 50 mA / 8 Ω	PROTECTION
251-253	1600/1	P5	0.25 100VA	1600V / 25 mA / 8 Ω	PROTECTION
351-352 JOINT TO S2	800/1	20	0.25 100VA	800V / 50 mA / 8 Ω	METERING
351-353 JOINT TO S3	1600/1	20	0.25 100VA	1600V / 25 mA / 8 Ω	METERING
451-452	800/1	P5	0.25 100VA	800V / 50 mA / 8 Ω	PROTECTION
451-453	1600/1	P5	0.25 100VA	1600V / 25 mA / 8 Ω	PROTECTION
551-552	800/1	P5	0.25 100VA	800V / 50 mA / 8 Ω	PROTECTION
551-553	1600/1	P5	0.25 100VA	1600V / 25 mA / 8 Ω	PROTECTION

(WORK ORDER NO. 16077X19000 & 16077Z19000)
P.O. NO. CC-CS/172-NR1/SS-1062/3/G1/NOA-1/3027 & C
M/S POWER GRID CORPORATION OF INDIA (P.G.C.I.L.)
(WORK ORDER NO. 70426X19000 & 70426Z19000)
भारत में निर्मित MADE IN INDIA

تصویر 12: قلم شماره 12 (Capacitor Voltage Transformer 220kV) - سب ستیشن پشته سرخ - پروان برشنا

संधारित्र वोल्टता परिणामित्र
CAPACITOR VOLTAGE TRANSFORMER

क्र. सं. SERIAL NO.	6180395	वर्ष YEAR OF MANUFACTURE	2013	वोल्टेज VOLTAGE	220KV	फेज PHASE	सिंगल SINGLE	वोल्टेज VOLTAGE	220KV
ड्राइंग नं. O.C.A. DRAWING NO.	610478	इन्सुलेशन स्तर INSULATION LEVEL kVp	507/1150	रेटिंग RATED BURDEN (VA)	50	वोल्टेज VOLTAGE	220KV	फेज PHASE <td>सिंगल SINGLE</td>	सिंगल SINGLE
प्लेक स्पेक. नं. PLC SPEC. NO.	610478	रेटिंग वोल्टेज फाल्ट फ़ैक्टर / टाइम RATED VOLTAGE FACTOR / TIME	1.5/30 SEC	वोल्टेज VOLTAGE	220KV	फेज PHASE <td>सिंगल SINGLE</td> <td>वोल्टेज VOLTAGE</td> <td>220KV</td>	सिंगल SINGLE	वोल्टेज VOLTAGE	220KV
उच्चतम तन्त्र वोल्टेज कि. वी. HIGHEST SYSTEM VOLTAGE	245 kV	वोल्टेज फाल्ट फ़ैक्टर / टाइम RATED VOLTAGE FACTOR / TIME	1.5/30 SEC	वोल्टेज VOLTAGE	220KV	फेज PHASE <td>सिंगल SINGLE</td> <td>वोल्टेज VOLTAGE</td> <td>220KV</td>	सिंगल SINGLE	वोल्टेज VOLTAGE	220KV
मानक STANDARD	IS 3156/IEC 60044-5	वोल्टेज फाल्ट फ़ैक्टर / टाइम RATED VOLTAGE FACTOR / TIME	1.5/30 SEC	वोल्टेज VOLTAGE	220KV	फेज PHASE <td>सिंगल SINGLE</td> <td>वोल्टेज VOLTAGE</td> <td>220KV</td>	सिंगल SINGLE	वोल्टेज VOLTAGE	220KV

POWER GRID CORP. OF INDIA LTD. 220KV VOLTAGE TRANSFORMER (NEW) 5% FACTAGE APURANISHAN
P.O. NO. CC-CS/172-NR1/SS-1062/3/G1/NOA-1/3027 DATE 21-10-2013

खतरा
DANGER

नोट
NOTE

वर्ष 2013 की 220 के वी. सप्लाय से जुड़ी हो तो प्राथमिक तर्मिनल बॉक्स की लिंक 1
एव द्वितीयक टर्मिनल बॉक्स की लिंक 3 को हटाना न करें
EARTH LINK 1 OF PRIMARY TERMINAL BOX AND EARTH LINK 3
OF SECONDARY TERMINAL BOX MUST NOT BE REMOVED WHILE
220 kV TERMINAL IS ALIVE
कैपेसिटर चार्ज नोड पर हो लिंक 3 को हटाना न करें
LINK 3 TO BE REMOVED ONLY WHEN CARRIER PROTECTION IS USED
भारत में निर्मित
MADE IN INDIA


भारत हेवी इलेक्ट्रिकल्स लिमिटेड, भोपाल
BHARAT HEAVY ELECTRICALS LIMITED, BHOPAL

10/18


Handwritten signature and notes in blue ink.

Handwritten signature and notes in blue ink, including a circular stamp with the text 'Afghanistan Breshna Sherkat'.

تصویر 13: قلم شماره 13 (Circuit Breaker 220kv) - سب ستیشن پشته سرخ - پروان برشنا

GAS CIRCUIT BREAKER			
TYPE : 200-SFM-405		RATED VOLTAGE 245 kV	
RATED LIGHTNING IMPULSE WITHSTAND VOLTAGE 1175 kVp		RATED FREQUENCY 50 Hz	
RATED SHORT-CIRCUIT BREAKING CURRENT 40 kA		RATED NORMAL CURRENT 1250 A	
FIRST POLE TO CLEAR FACTOR 1.3		RATED CLOSING VOLTAGE 220 V DC	
MOTOR VOLTAGE 240V AC		RATED OPENING VOLTAGE 220 V DC	
RATED DURATION OF SHORT CIRCUIT CURRENT 40 kA 3 SECs.		RATED SF6 GAS PRESSURE $\frac{10 \pm 0.5}{10 \pm 0.5}$ MPa (AT 20°C)	
RATED LINE CHARGING BREAKING CURRENT 1250A		RATED VOLTAGE AND FREQUENCY FOR AUX. CIRCUIT 1 ϕ 240V AC, 50Hz	
GAS WT. 24 Kg		TOTAL WT. WITH GAS 3900 Kg	
SR. NO. * *		RATED OPERATING SEQUENCE D-0.3 SEC-CO-3 min-CO	
YEAR OF MFG. 2012		STD. - IEC 62271-100	
CUSTOMER:-BHARAT HEAVY ELECTRICAL LTD. PROJECT:-220/20 KV CHARIKAR (NEW) & 220/20KV DASHI(NEW) SUBSTATION ASSOCIATED WITH CONSULTANCY SERVICES FOR NEW AFGHANISTAN LOA NO 142P160 10- AUG-12			
		Crompton Greaves Ltd. SWITCHGEAR DIVISION S3 AMBAD, NASHIK.	
K50 DRILL 4 HOLES			

تصویر 14: قلم شماره 14 (REF Protection Relay) - سب ستیشن پشته سرخ - پروان برشنا

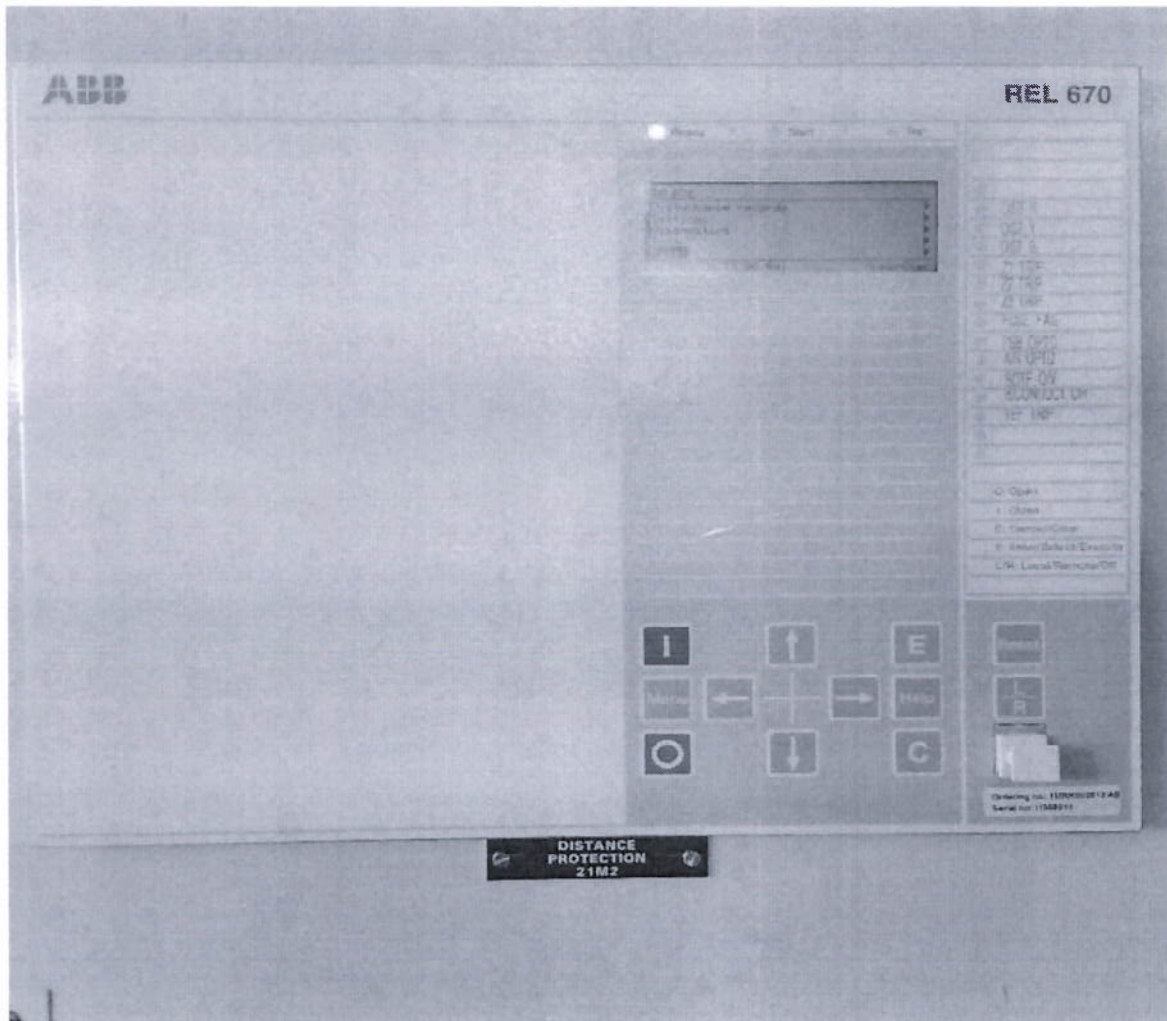
P141316N6M0468J SER No. 36194149/10/12 TEST ID. 194149Z DIAG No. 10P14102		Vx $\begin{cases} 110 - 250 V \sim \\ 100 - 240 V \sim \end{cases}$ In 1/5A 50/60 Hz Vn 100 - 120 V		 US E347697 LISTED IND. CONT. EQ. 4GF1 TYPE 1	
TRIP		TDID			

11/10/12

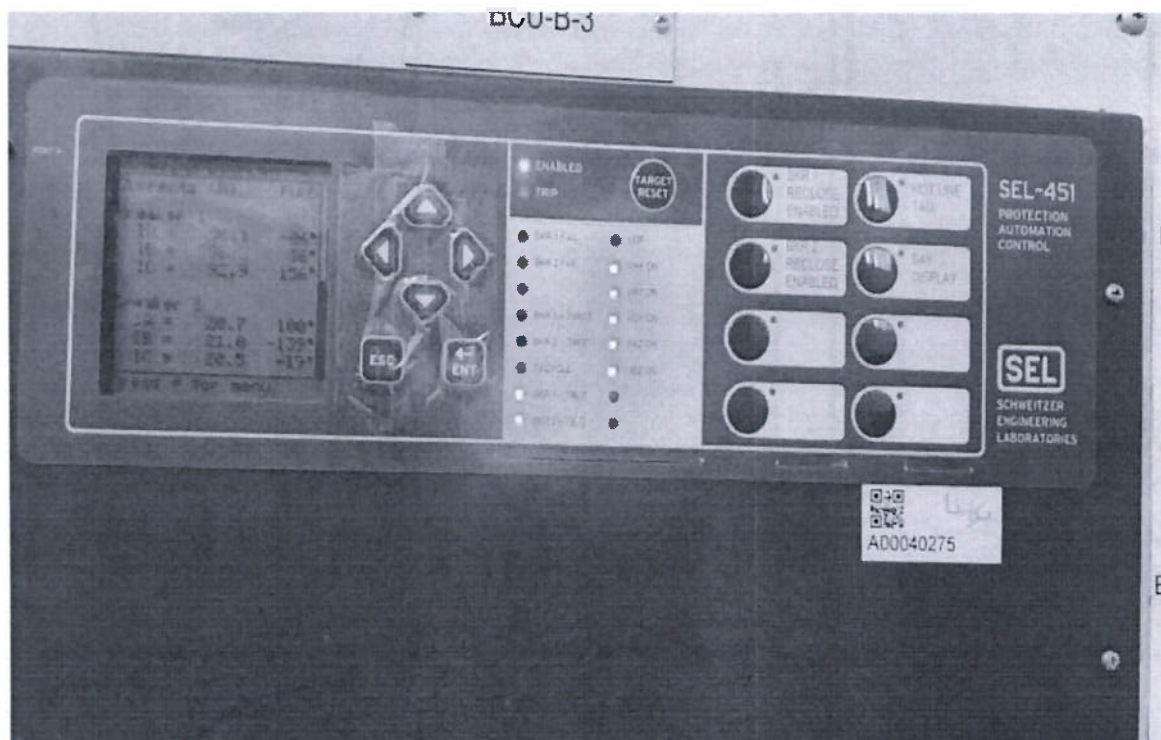
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تصویر 15: قلم شماره 15 (Distance Protection (REL 670)) - سب ستیشن پشته سرخ - پروان برشنا



تصویر 16: قلم شماره 18 (Sel-451- protection automation control relay) سب ستیشن دوراهی - هلمند برشنا

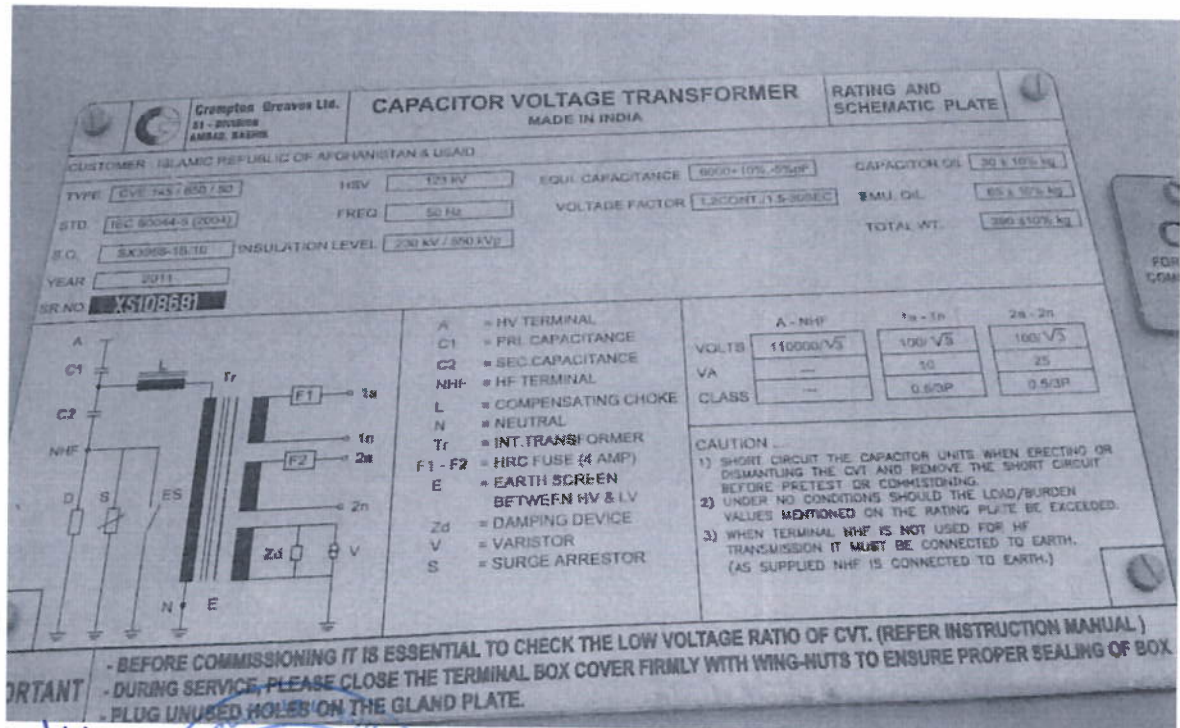


12/18
 Asadullah
 مینواله
 Shekhar Shekhar
 (Circular stamp with text in Urdu and English)

تصویر 17: قلم شماره 19 (D60-Line distance protection system relay) سب ستیشن دوراهی - هلمند برشنا




تصویر 18: قلم شماره 20 (CVT for 110kV) سب ستیشن دوراهی - هلمند برشنا



13/18

Handwritten signature and stamp.


भारत हेवी इलेक्ट्रिकल्स लिमिटेड, झांसी
BHARAT HEAVY ELECTRICALS LIMITED, JHANSI

धारा परिणामित्र

मानक STANDARD

अधिकतम तंत्र वोल्टता कि. वो.
HIGHEST SYSTEM VOLTAGE kV

विद्युत रोधन स्तर कि.वो.
INSULATION LEVEL kVp

आवृत्ति FREQUENCY हर्ट्स Hz

अल्पकालीन धारा कि.ऐ.
SHORT TIME CURRENT kA

CURRENT TRANSFORMER

निर्धारित प्राथमिक धारा ऐम्पियर
RATED PRIMARY CURRENT AMPS.

आरेख संख्या DRAWING NO.

विद्युत विनिर्देश ELEC. SPEC.

क्रम संख्या SERIAL NO.

विभाजन DIVISION

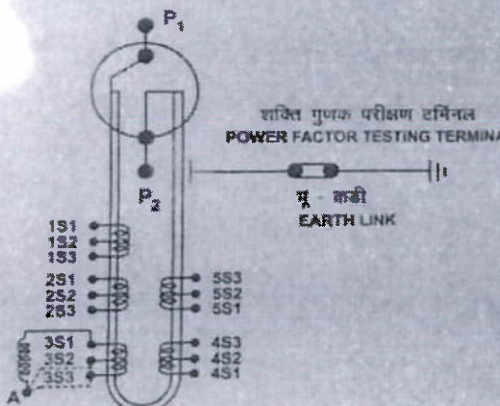
निर्माण वर्ष MFG. YEAR

CT. SUITABLE ABOVE MSL

IS: 2705	1600
245	120%
460 / 1050	2477105/100
50	640024
40 FOR 1 SEC.	झांसी JHANSI
	1800 MTRS

सावधानी 1. भार विद्युत लक्षणे से पूर्व द्वितीयक टर्मिनल्स को अवश्य ही लघुपथन करें।
2. शक्ति गुणक परीक्षण टर्मिनल्स को न हटाये जब परिणामित्र उद्घाटित हो।

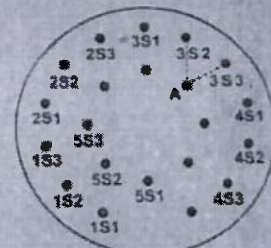
CAUTION 1 SECONDARY TERMINALS MUST BE SHORT CIRCUITED BEFORE THE BURDEN IS DISCONNECTED.
2. POWER FACTOR TESTING TERMINALS SHOULD NOT BE OPENED WHILE TRANSFORMER IS ENERGISED.



शक्ति गुणक परीक्षण टर्मिनल
POWER FACTOR TESTING TERMINAL

भू - कड़ी
EARTH LINK

द्वितीयक टर्मिनल विन्यास
SECONDARY TERMINALS ARRANGEMENT



टर्मिनल्स TERMINALS	अनुपात ऐ. RATIO AMPS.	निर्धारण वो. ऐ. V.A.	RATING श्रेणी CLASS	वोल्ट / ऐम्प / ओम्स K.V. / EX AMPS. AT VK / SECY. OHMS AT 75° C	द्वितीयक का प्रयोजन PURPOSE OF SECY.
1S1 - 1S2	800 / 1	-	PS	800V / 50 mA / 4 Ω	PROTECTION
1S1 - 1S3	1600 / 1	-	PS	1600V / 25 mA / 8 Ω	PROTECTION
2S1 - 2S2	800 / 1	-	PS	800V / 50 mA / 4 Ω	PROTECTION
2S1 - 2S3	1600 / 1	-	PS	1600V / 25 mA / 8 Ω	PROTECTION
3S1 - 3S2	800 / 1	20	0.2% ISF<5		METERING
JOINT A TO 52					
3S1 - 3S3	1600 / 1				
JOINT A TO 53					
4S1 - 4S2	800 / 1	-	PS	800V / 50 mA / 4 Ω	PROTECTION
4S1 - 4S3	1600 / 1	-	PS	1600V / 25 mA / 8 Ω	PROTECTION
5S1 - 5S2	800 / 1	-	PS	800V / 50 mA / 4 Ω	PROTECTION
5S1 - 5S3	1600 / 1	-	PS	1600V / 25 mA / 8 Ω	PROTECTION

(WORK ORDER NO. 16077X19000 & 16077Z19000)

P.O. NO. CC-CS / 172 - NR1 / 53 - 1062 / 3 / G1 / NOA-1 / 3927 & C

M/S. POWER GRID CORPORATION OF INDIA (P.G.C.I.L.)

(WORK ORDER NO. 70426X19000 & 70426Z19000)

भारत हेवी इलेक्ट्रिकल्स लिमिटेड, झांसी, भारत INDIA



14/18

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Item 16 - Lot 5

Technical Data Sheets For Battery Chargers			
UNIT	220V/50A FLOAT CUM BOOST BATTERY CHARGER		
NO	DESCRIPTION	REQUIRED	OFFERED
1	Charger dimension : (approx)		
	a) Height (H) (mm)	2000	
	b) Depth (W) (mm)	600	
	c) Width (L) (mm)	600	
	d) Sheet thickness (mm)	2.0 MM (CRCA)	
2	Charger weight (Kg)	400 KG Approx.	
3	Nominal Voltage rating	220 V DC	
	Output Voltage	CP 244±1% CC 296 CP 50A CC 40A ± 2%	
4	Rating of Charger in Float cum Boost Mode	50A/40A	
5	Battery Data	4V 100Ah plate type, medium discharge	
	a) Nominal cell Voltage	1.2V/CELL	
	b) Float Voltage	1.4V/CELL	
	c) Boost Charging Voltage	1.7V/CELL	
	d) End Cell Voltage	1.14V/CELL	
	e) No of Cell	174 Nos	
	f) Battery Rating	400AH	
6	Charger Efficiency	≥ 80% at rated load & rated input supply	
7	Power Factor	0.8 lag at rated load & Rated output	
8	Fault Currents		
	a) Short Circuit AC Current	20KA	
	b) Short Circuit DC Current	20KA	
9	AC Input Power Supply	415V±10% 50Hz/50 3 PHASE 4 WIRE AC SUPPLY, SCHEMATIC EARTHED	
10	Charger rated output current		
	a) Float charging mode	40A	
	b) Boost charging mode	50A	





15/10/19

Technical Data Sheets For Battery Chargers			
UNIT	:220V/50A FLOAT CUM BOOST BATTERY CHARGER		
NO	DESCRIPTION	REQUIRED	OFFERED
1	Charger dimension : (approx.)		
	a) Height (H) (mm)	2000	
	b) Depth (W) (mm)	600	
	c) Width (L) (mm)	800	
	d) Sheet thickness (mm)	2.0 MM (CRCA)	
2	Charger weight (Kg)	400 KG Approx.	
3	Nominal Voltage rating	220 V DC	
	Output Voltage	CP 244±1% CC 296 CP 50A CC 40A ± 2%	
4	Rating of Charger in Float cum Boost Mode	50A/40A	
5	Battry Data	Ni-Cd pocket plate with medium discharge	
	a) Nominal cell Voltage	1.2V/CELL	
	b) Float Voltage	1.4V/CELL	
	c) Boost Charging Voltage	1.7V/CELL	
	d) End Cell Voltage	1.14V/CELL	
	e) No of Cell	174 Nos	
	f) Battery Rating	400AH	
6	Charger Efficiency	≥ 80% at rated load & rated input supply	
7	Power Factor	0.8 Lag at rated load & Rated input.	
8	Fault Currents		
	a) Short Circuit AC Current	20KA	
	b) Short Circuit DC Current	10KA	
9	AC Input Power Supply	415V±10%, 50HZ±5% 3 PHASE, 4 WIRE AC SUPPLY , SOLIDLY EARTHED	
10	Charger rated output current:		
	a) Float cahrging mode:	40A	
	b) Boost charging mode	50A	



NO	DESCRIPTION	REQUIRED	OFFERED
11	Load limiter current setting range (Trickle mode)	80%-100%	
12	Automatic voltage regulator(float mode)		
	a) Type	Static SCR control	
	b) % stabilization of the output DC voltage	±1%	
	c) Voltage setting range	720V - 250 V	
	d) Response time of automatic Voltage regulator	10-15 sec	
13	Manual voltage regulator (Float mode)		
	a) Type	Through Potentiometer	
	b) Voltage setting range	0-305V	
14	Float charging current setting range	80% TO 100%	
15	Boost charging limit setting range	50% TO 100%	
16	Rectifier assembly:		
	a) Type of semi-conductor material	Silicon	
	b) Rated direct current	50A	
	c) Rated direct voltage	220 V DC	
	d) Rated input Voltage	Input 415 V/10% 50Hz±5 % 3ph 4 wire AC supply . به داخل اینک به تعداد 3 تا 24 عدد بطری به ولتاژ 300 در نظر Voltage Drop = 2.2v به هر Cell در هر گرفته میشود که مجموع مساحتی به 200 وات الی 300 وات نیاز است	
	e) Type of connection of rectifier element	Full wave Full control	
	f) Standard applicable	IS : 3895	
	g) Ripple (peak to peak)	≤1 %	
17	Rectifier transformer		
	a) Type	Double Wound Air Natural	
	b) Rated KVA	21.5 KVA	
	c) % impedance	Impedance : < 5%	
	d) Input line winding Connection in vector Representation	Star	
	e) Cell winding connection in vector representation	Delta	
	f) min. power frequency withstand voltage (KV)	2.5 KV	
	g) Standard applicable	IS - 2020	
	h) Class of insulation.	Class F	





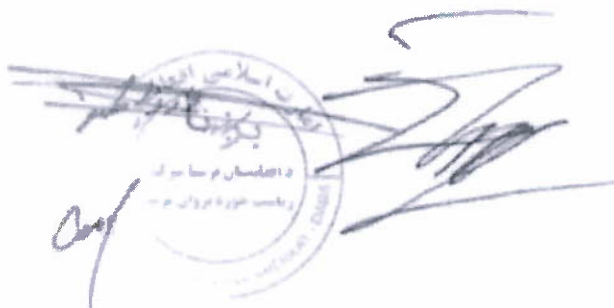
16/11/18



NO	DESCRIPTION	REQUIRED	OFFERED
11	Load limiter current setting range (Trickle mode)	80%-100%	
12	Automatic voltage regulator(float mode)		
	a) Type	Static SCR control	
	b) % stabilization of the output DC voltage	±1%	
	c) Voltage setting range	220V - 250 V	
	d) Response time of automatic Voltage regulator	10-15 sec	
13	Manual voltage regulator (Float mode)		
	a) Type	Through Potentiometer	
	b) Voltage setting range	0-305V	
14	Float charging current setting range	80% TO 100%	
15	Boost charging limit setting range	50% TO 100%	
16	Rectifier assembly:		
	a) Type of semi-conductor material	Silicon	
	b) Rated direct current	50A	
	c) Rated direct voltage	220 V DC	
	d) Rated input Voltage	Input 415 V/10% 50Hz±5 % 3Ph 4 wire AC Supply . input voltage 300 به دلیل اینکه به تعداد 174 عدد بطری 300 مقدار در نظر گرفته میشود که مجموعاً مساوی به 298 ولت الی 300 ولت نیاز در نظر Voltage Drop = 2.2v نیاز است و بر علاوه آن Cell در هر Boost Charge=1.7 V در بطری روم موجود بوده که برای هر بطری است.	
	e) Type of connection of rectifier element	Full wave Full control	
	f) Standard applicable	IS : 3895	
	g) Ripple (peak to peak)	≤1 %	
17	Rectifier transformer		
	a) Type	Double Wound Air Natural	
	b) Rated KVA	21.5 KVA	
	c) % impedance	Impedence : < 5%	
	d) Input line winding Connection in vector Representation	Star	
	e) Cell winding connection in vector representation	Delta	
	f) 1 min. power frequency withstand voltage (KV)	2.5 KV	
	g) Standard applicable	IS - 2026	
	h) Class of Insulation	Class F	



NO	DESCRIPTION	REQUIRED	OFFERED
18	Instrument		
	a) Type	Analog	
	b) AC voltmeter range	0-500V	
	c) AC Ammeter range	0-50A	
	d) DC voltmeter range	0-120V & 400V-0-400V	
	e) DC Ammeter range	0-25A	
	f) Dial size	96X96 Sq. mm	
	g) Accuracy class as per IS	CL - 1.0	
19	Contactor		
	a) Type	Air Break	
	b) Rated Voltage	415V AC	
	c) Rated current	32A	
	d) No. of power contact	3 Nos	
	e) No. Type and rating of Aux. contacts	1NO + 1 NC	
	f) operating coil voltage	240V AC	
	g) Drop - out voltage	140V AC	
20	Air - break switches DC/MCCB		
	a) Type	MCCB	
	b) Rated voltage	250V DC	
	c) Rated current	75A 3P	
	d) Type and material of Contacts	COPPER WITH SILVER PLATED	
	e) Standard applicable	IS - 13947	
21	AC MCCB		
	a) Type	4 POLE AC	
	b) Mechanical Interlock	YES	
	c) Rated Current	40A	
	d) Standard applicable	IS - 13947	
22	Temperature sensor	NOT applicable	
23	Efficiency of charger	≥80% at rated load & rated input supply	





17/10/18

NO	DESCRIPTION	REQUIRED	OFFERED
18	Instrument		
	a) Type	Analog	
	b) AC voltmeter range	0-500V	
	c) AC Ammeter range	0-50A	
	d) DC voltmeter range	0-400V & 400V-0-400V	
	e) DC Ammeter range	0-75A	
	f) Dial size	96X96 Sq.mm	
	g) Accuracy class as per IS	CL - 1.0	
19	Contactor		
	a) Type	Air Break	
	b) Rated Voltage	415V AC	
	c) Rated current	32A	
	d) No. of power contact	3 Nos	
	e) No. Type and rating of Aux. contacts	1NO + 1 NC	
	f) operating coil voltage	240V AC	
	g) Drop - out voltage	140V AC	
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	a) Type	MCCB	
	b) Rated voltage	250V DC	
	c) Rated current	75A 3P	
	d) Type and material of Contacts	COPPER WITH SILVER PLATED	
	e) Standard applicable	IS - 13947	
21	AC MCCB		
	a) Type	4 POLE AC	
	b) Mechanical Interlock	YES	
	c) Rated Current	40A	
	d) Standard applicable	IS : 13947	
22	Temperature sensor	NOT applicable	
23	Efficiency of charger	≥80% at rated load & rated input supply	



NO	DESCRIPTION	REQUIRED	OFFER
24	Grounding	<p>Solidly earthed</p> <p>Grounding a) The charger panels shall have fully rated ground bus with two ground terminals, one at each end.</p> <p>b) Each terminal shall comprise two-bolt drilling with G.I. bolts, nuts and bimetallic washers for connecting to 50x6 mm G.I. flat. Ground bus shall be bolted to the panel structures, effectively grounding the entire assembly.</p> <p>The cases of meters, relays and switching devices shall be grounded through sheet steel structure.</p> <p>c) Whenever, the schematic diagrams indicate a definite ground at the panel, a single wire for each circuit thus grounded shall be run independently to the ground bus and connected there.</p>	
25	Maintenance System	DC under voltage and over voltage Relay, under voltage factor considering 10% input supply voltage variation, Regulation factor (this is considering taking 4% transformer impedance)	
26	Output voltage	CP 24±1% • C 296 CP 50A CC 40A ± 2%	
27	Type of Cooling System	Air natural	
28	Type of Battery	Ni-Cd pocket plate with medium discharge	
29	Installation system	indoor	
30	Panel IP (Degree of protection)	IP 42	
31	CRCASheet Steel thickness	2mm	



بازرسی شده و تایید شده است
 کارهای مورد نیاز از اسناد فنی
 و مدارات مورد نیاز تهیه شده است

نوت: داوطلب برنده مکلف است تا به مصارف شخصی خویش از سبب استقشش پشته سرخ در تعادله با آنچه نیاز منه بازتید نموده از مشخصات فنیکی، کارکرد و نوعیت جاز هر مورد ضرورت خود را مطمئن نماید.

18/18A
 Approved by
 2022/12

NO	DESCRIPTION	REQUIRED	OFFER
24	Grounding	<p>Solidly earthed:</p> <p>Grounding a) The charger panels shall have fully rated ground bus with two ground terminals, one at each end.</p> <p>b) Each terminal shall comprise two-bolt drilling with G.I. bolts, nuts and bimetallic washers for connecting to 50x6 mm G.I. flat. Ground bus shall be bolted to the panel structures, effectively grounding the entire assembly.</p> <p>The cases of meters, relays and switching devices shall be grounded through sheet steel structure.</p> <p>c) Wherever, the schematic diagrams indicate a definite ground at the panel, a single wire for each circuit thus grounded shall be run independently to the ground bus and connected theret</p>	
25	Maitenance System	DC under voltage and over voltage Relay, under voltage factor condiserig 10% input supply voltage variation, Regulation factor (this is considering taking 4 % transformer impedance)	
26	Output voltage	CP 244±1% CC 296 CP 50A CC 40A ± 2% :	
27	Type of Cooling System	Air natural	
28	Type of Battery	Ni-Cd pocket plate with medium discharge	
29	Installation system	Indoor	
30	Panel IP(Degree of protection)	IP 42	
31	CRCASheet Steel thickness	2mm ²	

18/10/13

