

PROJECT TITLE:			 GREEN CUBE IDEA ENGINEERING & MINING CO.		
TARAZ BITUMEN PLANT PROJECT					
Document Title	Document No.	REV	Page 1 of 4		
DATA SHEET for OIL IMMERSED POWER TRANSFORMERS	TRZ-EL-DS-630	1			
DATA SHEET for OIL IMMERSED POWER TRANSFORMERS					
01	17-Jun-2026	Issued for Approval	M.KARIMKHANI	h.ABHAJI	A.MOBARAKI
00	27-May-2026	Issued for Approval	M.KARIMKHANI	h.ABHAJI	A.MOBARAKI
REV.	DATE	PURPOSE OF ISSUE	PREPARED	CHECKED	APPROVED

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DOCUMENT TITLE		DOCUMENT No.		REV.	SHEET NO.
DATA SHEET for OIL IMMersed POWER TRANSFORMERS		TRZ-EL-DS-630		1	Page 3 of 4
Equipment No.		TR-01	Location	SABSTATION	
ITEM	REV	DESCRIPTION	DESIGN DATA	SUPPLIER DATA	
1	0	Manufacturer	By Supplier		
2	0	GENERAL DATA			
3	0	Standards / Codes	IEC		
4	0	General specification	-		
5	0	Location	Taraz-Kazakhstan		
6	0	Incoming Type	cable		
7	0	Outgoing Type	cable		
8	0	Mounting			
9	0	ENVIRONMENTAL CONDITIONS			
10	0	Place of installation: (indoors, outdoors, under shelter)	INDOOR, in safe area		
11	0	Design ambient temperature	Max : 43 °C , Min : -25°C		
12	0	Degree of protection (IP)	By Supplier		
13	0	Altitude above sea level	655m		
14	0	Special conditions (Tropical, etc.)	By Supplier		
15	0	Seismic zone	By Supplier		
16	0	GENERAL CHARACTERISTICS			
17	0	Rated power :	1000 KVA		
18	0	Rated primary voltage	10 kV		
19	0	Rated secondary voltage	0.4 kV		
20	0	Rated frequency	50 Hz		
21	0	Number of phases	3		
22	0	Connection symbol and vector group	Dyn 11		
23	0	INSULATION LEVEL			
24	0	Rated Power Frequency Withstand Voltage	By Supplier		
25	0	Rated Lightning Withstand Voltage	By Supplier		
26	0	INSULATION SYSTEM			
27	0	Class of insulation for windings	By Supplier		
28	0	Uniform insulation	Yes		
29	0	Non-uniform insulation	No		
30	0	If non uniform, power frequency withstand	No		
31	0	Oil immersed transformers	Yes		
32	0	Oil type	Mineral oil		
33	0	Sealed type	Yes		
34	0	Impregnated type	No		
35	0	Cast-resin (Encapsulated) type	No		
36	0	MODE OF OPERATION			
37	0	Individual	Yes		
38	0	Parallel	No		
39	0	PRIMARY WINDING			
40	0	Highest voltage (Um)	12 kV		
41	0	Copper	Yes		
42	0	Aluminium	No		
43	0	SECONDARY WINDING			
44	0	Highest voltage (Um)	1/1 kV		
45	0	Copper	Yes		
46	0	Aluminium	No		
47	0	Neutral brought out	Yes		
48	0	Method of system earthing	Solidly Grounded		
49	0	ELECTRICAL AND MECHANICAL CHARACTERISTICS			
50	0	No-load current (Primary)	By Supplier A		
51	0	Short circuit impedance at 75 °C	0.05		
52	0	Prim. System apparent short circuit rating	20 KA		
53	0	Withstanding short circuit duration	2 S		
54	0	Top oil temperature rise	45 °C measure by thermometer		
55	0	Average winding temperature rise	55 °C measure by resistant method		

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Equipment No.		TR-01	Location	SUBSTATION	
56	0	No-load losses	By Supplier	 kW	
57	0	Full load copper losses at 75 °C	By Supplier	 kW	
58	0	Total losses	By Supplier	 kW	
59	0	Efficiency at full load at 0.8 pf and 75 °C	By Supplier		
60	0	Efficiency at 50% load at 0.8 pf and 75 °C	By Supplier		
61	0	Load at maximum efficiency			
62	0	Maximum efficiency	By Supplier		
63	0	TAP CHANGERS			
64	0	Off – circuit (Y/N)	Yes		
65	0	On – load (Y/N)	No		
66	0	Nr of tappings	5		
67	0	Tapping steps	-5/-2.5/0/2.5/5 %		
68	0	Voltage regulator & parallel control system	No		
69	0	DIMENSIONS			
70	0	Overall with accessories (Height/Width/Depth)	By Supplier	mm	
71	0	Between roller axis	By Supplier	mm	
72	0	WEIGHT			
73	0	Total	By Supplier	 Kg	
74	0	Oil	By Supplier	 Kg	
75	0	Untanking	By Supplier	 Kg	
76	0	Noise level	70 db at 1M		
77	0	PRIMARY VOLTAGE SIDE CONNECTIONS			
78	0	Bus duct	No		
79	0	Cable connection	Yes		
80	0	Cable type	CU/XLPE/SWA/PVC		
81	0	Parallel cable	No		
82	0	Section of cable	50mm2 CU/95mm2 AL		
83	0	Type of bushing	By Supplier		
84	0	Space for current transformer	No		
85	0	Plug-in terminal	No(Prim.) / No(Sec.)		
86	0	Cable box	NO		
87	0	Protective enclosure complete with cable glands	NO		
88	0	SECONDARY VOLTAGE SIDE CONNECTIONS			
89	0	Bus duct	No		
90	0	Cable connection	Yes		
91	0	Cable type	CU/XLPE/PVC		
92	0	Parallel cable	Yes(3 cables for each phase)		
93	0	Section of cable	6x(1x300)for each phase +3x(1x300) for neutral		
94	0	Type of bushing	By Supplier		
95	0	Protective enclosure complete with cable glands	No		
96	0	Neutral terminal	Yes		
97	0	CONTROL AND PROTECTION DEVICES			
98	0	Over temperature / low level / over press. Relay with 2 contacts (alarm & trip)	Yes		
99	0	Buchholz relay with 2 contacts (alarm / trip)	Yes		
100	0	Thermal Image	No		
101	0	Top oil thermometer with 2 contacts (alarm / trip)	Yes		
102	0	Dial thermometer	Yes, diam. 100 mm		
103	0	Thermo well	Yes.		
104	0	Thermostat with 2 contacts (alarm / trip)	No		
105	0	Liquid level gauge	Yes		
106	0	Pressure relief valve with operating signal. Contact	NO		
107	0	1 CT on neutral for 51N relay	NO		