SIEMENS energy

Tag Number : TR-78-EHV/A-1

Liquid Immersed Power Transformer

Transformer type TDSN7955D	Serial No. V179401	Year of manufacture	Standard IEC60076
Rated power 63/80MVA	Rated frequency 50Hz	No-load loss XXX kW	Duration of short-circuit 3 s
Connection symbol YNd1	Number of phases 3	No-load current XXX %	Cooling method ONAN/ONAF(78.75%/100%)

Position	Voltage (V)		Current (A)		Impedance voltage (%)	Load Loss (kW)
-	HV	LV	HV	LV	HV-LV @ 63MVA	HV-LV
1	302500	34500	152.7	1338.8	XXX	XXX
9	275000	34500	168.0	1338.8	XXX	XXX
17	247500	34500	186.6	1338.8	XXX	XXX

Ambient temperature max.	40°C
Temperature rise of top oil	50K
Temperature rise of winding	55K
Insulation oil (IEC60296:2020)	Petro 45X Plus
Mass of insulation oil	XXX kg
Untanking mass	55700 kg
Transportation mass with oil	94000 kg
Total mass with oil	127000 kg

Insulation Level (kV)	HV / HVN / LV LI1050 AC460 / LI170 AC70 / LI170 AC70
Max. system short-circuit power	HV/LV 26000MVA/2000MVA
Tap changer type	VM III 350Y-72.5/C-10193W
Sound pressure level (dBA)	XXX
Tank and conservator full vacuum resistant	NOTE: XXX will be confirmed after testing stage

Current transformer according to IEC61869

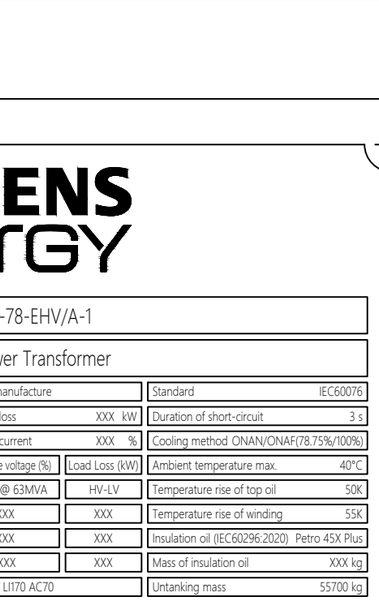
Item	Quantity	Ratio	Rated output	Accuracy class	Taps	Purpose
CE150	1	220/2A	20VA	1	S1-S2	For HV winding temperature
CE104-T1	1	200/1A	PX: Vk≥457V, Im≤40mA,Rct@75°C≤0.8Ω		S1-S2	For 64REF/HV
		400/1A	PX: Vk≥350V, Im≤40mA,Rct@75°C≤1.6Ω		S1-S3	
CE117~119-T1	3	1600/1A	PX: Vk≥200V, Im≤40mA,Rct@75°C≤6.4Ω		S1-S2	For 87T TX DIFF
CE118-T2	1	1600/1A	30VA	0.5FS5	S1-S2	For AVR
CE151	1	1550/2A	20VA	1	S1-S2	For LV winding temperature
CE301	1	33/√3 : 0.11/√3	50VA	0.5	1a-1n	For AVR
		33/√3 : 0.11/√3	50VA	3P	2a-2n	

Attention: High voltage at C.T. terminals on open secondary circuit!

overpressure leakage test : 226 Torr (30 kPa) over the normal liquid pressure, duration time 24h

vacuum treatment onsite : 0.75 Torr (100Pa) inside the tank, duration time equals to the exposed time to air of the active part after oil impregnated during the assembly process, and the allowed maximum duration time is 96h

Connection diagram		Pos.	Connections of tap selector 2-	change-over	Voltage(V)	Current(A) 63/80(MVA)
b r y	—	—	—	—	34500	1054.3/1338.8
	Max.	1	12		302500	120.2/152.7
		2	11		299063	121.6/154.4
		3	10		295625	123.0/156.2
		4	9		292188	124.5/158.1
		5	8	3-4	288750	126.0/160.0
		6	7		285313	127.5/161.9
		7	6		281875	129.0/163.9
		8	5		278438	130.6/165.9
R N B Y		9A	4			
	Rated	9B	3		275000	132.3/168.0
		9C	12			
		10	11		271563	133.9/170.1
		11	10		268125	135.7/172.3
		12	9		264688	137.4/174.5
		13	8	3-12	261250	139.2/176.8
		14	7		257813	141.1/179.2
		15	6		254375	143.0/181.6
		16	5		250938	144.9/184.1
	Min.	17	4		247500	147.0/186.6



Siemens Energy Transformer (Wuhan) Co., Ltd.

Made in Wuhan, China

R5 Ø8 R9

470 500

270 300

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Date: 2023.12.04 15:00:16 EET
Reason: MoldSign Signature
Location: Moldova

Note: This name plate is from another project, name plate of this project will be provided after detailed design and order.

Revision
–1.update according to comments. LiuHuan 2023-04-24
–2.update according to comments. LiuHuan 2023-05-29
–3.update according to comments. LiuHuan 2023-06-21
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General tolerances ISO2768-C	Scale 1:1	Size A1H	Date of revision 2023-06-21	CAD system AutoCAD	Projection method
Responsible department STWH TE MD	Technical reference LiuHuan		Document type ---	Project Malaysia LNG-GLORY Project	
SIEMENS energy	Created by ZhouYang ---		Title, Supplementary title Rating Plate Drawing TR-78-EHV/A-1	Drawing number V04 35 987	Order number V179401
	Approved by LiaoWei			Rev. 3 / Date of issue 2023-04-14	Language EN / Sheet 01-

SIEMENS energy

Tag Number : TR-78-EHV/A-6

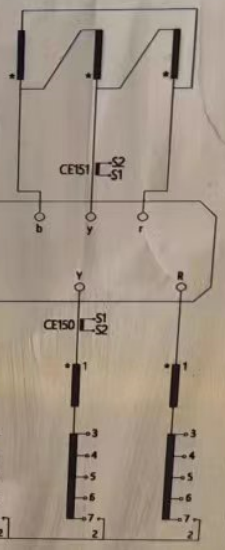
Liquid Immersed Power Transformer

Transformer type	TDUN7755D	Serial No.	VT79406	Year of manufacture	2023	Standard	IEC60076
Rated power	45/55MVA	Rated frequency	50Hz	No-load loss	24.55 kW	Duration of short-circuit	3 s
Connection symbol	YNd1	Number of phases	3	No-load current	0.078 %	Cooling method ONAN/ONAF (81.82%/100%)	
						Ambient temperature max.	40°C
						Temperature rise of top oil	50K
						Temperature rise of winding	55K
						Insulation oil (IEC 60296:2000) Petro 45X Plus	
						Mass of insulation oil	26300 kg
						Untanking mass	46000 kg
						Transportation mass with oil	78000 kg
						Total mass with oil	101000 kg
						Sound pressure level (dBA)	62.8

Position	Voltage (V)		Current (A)		Impedance voltage (%)	Load Loss (kW)
-	HV	LV	HV	LV	HV-LV@55MVA	HV-LV@55MVA
1	288750	30000	110.0	1058.5	15.04	202.06
3	275000	30000	115.5	1058.5	14.66	207.14
5	261250	30000	121.5	1058.5	14.34	214.33

Insulation Level (kV)	HV / HVN / LV LI1050 AC460 / LI170 AC70 / LI170 AC70
Max. system short-circuit power	HV/LV 26000MVA/2000MVA
Tap changer type	DU III 200-72.5-06050Y Tank and conservator full vacuum resistant
overpressure leakage test : 226 Torr (30 kPa) over the normal liquid pressure, duration time 24h	
vacuum treatment onsite : 0.75 Torr (100Pa) inside the tank, duration time equals to the exposed time to air of the active part after oil impregnated during the assembly process, and the allowed maximum duration time is 96h	

Current transformer according to IEC61869						
Item	Quantity	Ratio	Rated output	Accuracy class	Taps	Purpose
CE104-T1	1	200/1A	PX: Vk≥412, Im≤40mA,Rct@75°C≤0.8Ω		S1-S2	For REF/HV
CE150	1	140/2A	20VA	1	S1-S2	For HV winding temperature
CE151	1	1200/2A	20VA	1	S1-S2	For LV winding temperature
Attention: High voltage at C.T. terminals on open secondary circuit!						



Connection diagram		Pos.	tap selector 2-	Voltage(V)	Current(A) @45MVA (ONAN)	Current(A) @55MVA (ONAF)
R N B Y	Max.	1	7	288750	90.0	110.0
		2	6	281875	92.2	112.7
	Rated	3	5	275000	94.5	115.5
		4	4	268125	96.9	118.4
	Min.	5	3	261250	99.4	121.5
b r y	—	—	—	30000	866.0	1058.5

Siemens Energy Transformer (Wuhan) Co., Ltd.

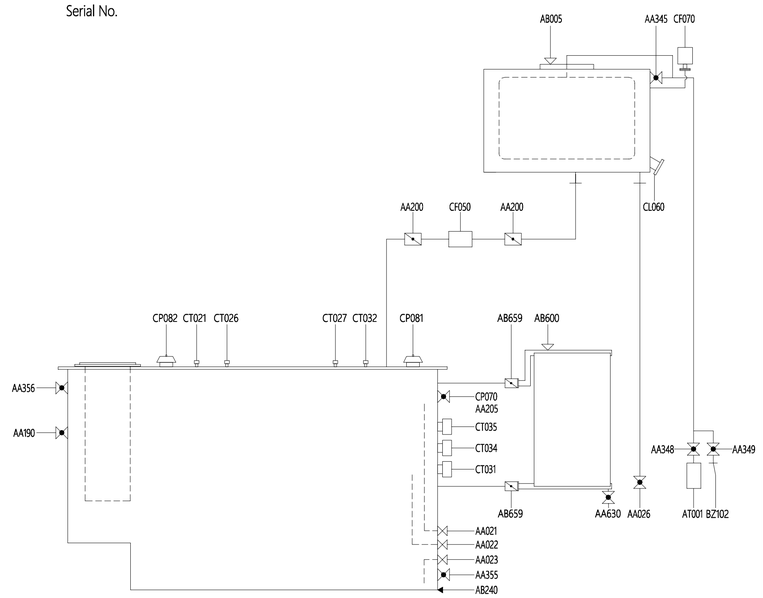
Made in Wuhan, China

R5 Ø8 R9

SIEMENS energy

Monitoring devices,pipes,fittings and position of shutoff devices

Serial No.



Item No.	Name	Item No.	Name
AA021	Oil sample valve, top	AB659	Butterfly valve for radiator (top and bottom)
AA022	Oil sample valve, middle	AT001	Dehydrating breather for main conservator
AA023	Oil sample valve, bottom	BZ102	Vacuum connection
AA026	Drain and filling valve for main conservator	CF050	Buchholz relay for tank
AA190	Valve for on-line monitor system	CF070	Protection relay for rubber bag
AA200	Valve between tank and main conservator	CL060	Oil level indicator in main conservator
AA205	Valve between tank and sudden pressure relay	CP070	Rapid pressure rise realy
AA345	Valve between air space and main conservator after air bag	CP081	Pressure relief device for tank
AA348	Valve between Breather AT001 and main conservator	CP082	Pressure relief device for tank
AA349	Valve between Vacuum connection and main conservator	CT021	Resistance thermometer detector for OTI CT031
AA355	Drain at failure / Filter outlet / Filling under vacuum Valve	CT026	Resistance thermometer detector for WTI CT034
AA356	Filter inlet Valve	CT027	Resistance thermometer detector for WTI CT035
AA630	Drain valve for radiator	CT031	Dial type thermometer for tank oil temperature
AB005	Air vent for main conservator	CT032	Resistance thermometer detector for Sensformer
AB240	Residual oil drain device for tank	CT034	Dial type thermometer for winding temperature of HV
AB600	Air vent plug for radiator	CT035	Dial type thermometer for winding temperature of LV

															AB659		
Valve No.	AA021	AA022	AA023	AA026	AA190	AA200	AA205	AA345	AA355	AA356	AA630	AB005	AB240	AB600	Top	Bottom	BZ102
Operation	●	●	●	●	○	○	○	●	●	●	●	●	●	●	○	○	●
Transport	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Filling under vacuum after final assembly	●	●	●	●	●	○	●	○	○	●	●	●	●	●	○	○	○
Filtration maintenance	●	●	●	●	●	○	●	●	○	○	●	●	●	●	○	○	●

WARNING!

Before applying the vacuum treatment please refer to Maintenance instructions

▷◁ = Ball valve
▷◁ = Gate valve
▷◁ = Oil sample valve
◹ = Butterfly valve
▲ = Oil drain plug
▽ = Air vent plug
● = Position closed
○ = Position open
▶ = Residual oil drain device

270
300
470
500

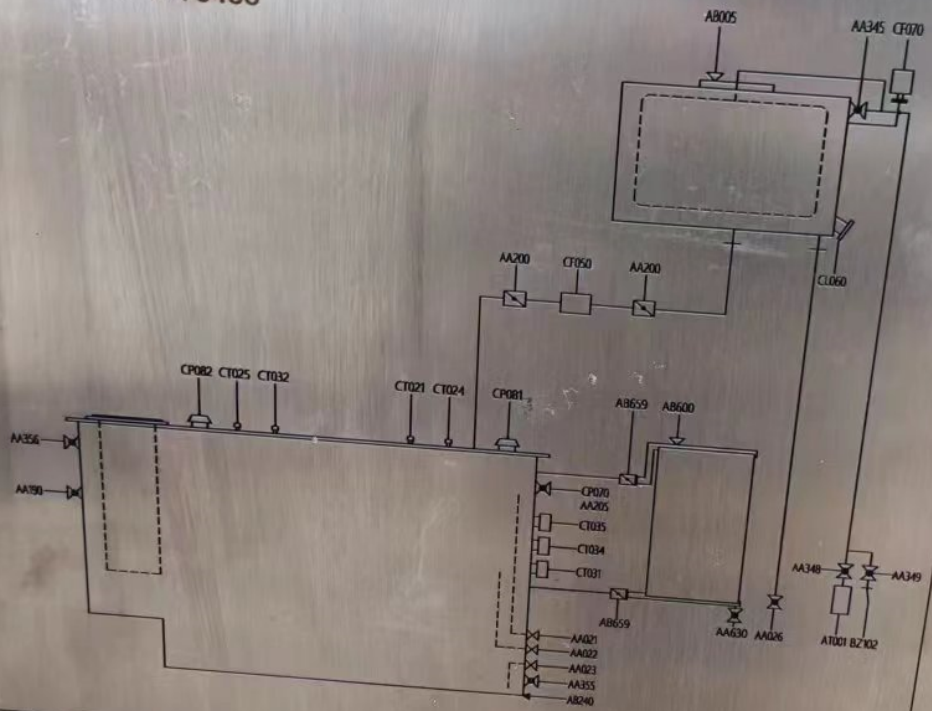
Note: This name plate is from another project, name plate of this project will be provided after detailed design and order.

Revision	–1 Update drawing 2023-05-28 –2 Update drawing 2023-06-19				
General tolerances: TOL	Scale: 1:1	Size: A1H	Date of revision: –	CAD system: AutoCAD	Projection method
Responsible department: STWH TE MD	Technical reference: HuanXianBo		Document type: ––	Project: Malaysia LNG-GLORY Project	
SIEMENS energy	Created by: FangLi ––		Title, Supplementary title: Valve Function Plate Drawing	Drawing number: V04 35 675	Order number: V179405-06
	Approved by: LiaoWei		TR-78-EHV/A-5&TR-78-EHV/A-6	Rev.: 2 / Date of issue: 2023-04-17	Language: EN / Sheet: 01–

SIEMENS energy

Monitoring devices,pipes,fittings and position of shutoff devices

Serial No. **V179406**



Item No.	Name
AA021	Oil sample valve, top
AA022	Oil sample valve, middle
AA023	Oil sample valve, bottom
AA026	Drain and filling valve for main conservator
AA350	Valve for on-line monitor system
AA200	Valve between tank and main conservator
AA205	Valve between tank and sudden pressure relay
AA345	Valve between air space and main conservator after air bag
AA348	Valve between Breather A1001 and main conservator
AA349	Valve between Vacuum connection and main conservator
AA355	Drain at failure / Filter outlet / Filling under vacuum Valve
AA356	Filter inlet Valve
AA630	Drain valve for radiator
AB005	Air vent for main conservator
AB240	Residual oil drain device for tank
AB600	Air vent plug for radiator

Item No.	Name
AB659	Butterfly valve for radiator (top and bottom)
AT001	Dehydrating breather for main conservator
BZ102	Vacuum connection
CF050	Buchholz relay for tank
CF070	Protection relay for rubber bag
CL060	Oil level indicator in main conservator
CP070	Rapid pressure rise realy
CP081	Pressure relief device for tank
CP082	Pressure relief device for tank
CT021	Resistance thermometer detector for OIl CT031
CT024	Resistance thermometer detector for WIl CT034
CT025	Resistance thermometer detector for WIl CT035
CT031	Dial type thermometer for tank oil temperature
CT032	Resistance thermometer detector for Sensformer
CT034	Dial type thermometer for winding temperature of HV
CT035	Dial type thermometer for winding temperature of LV

Valve No.	AA021	AA022	AA023	AA026	AA350	AA200	AA205	AA345	AA348	AA349	AA355	AA356	AA630	AB005	AB240	AB600	AB659			
																	Top	Bottom	BZ102	
Operation	●	●	●	●	○	○	○	●	○	●	●	●	●	●	●	●	○	○	●	
Transport	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	○	●	
Filling under vacuum after final assembly	●	●	●	●	●	○	●	○	●	○	○	●	●	●	●	●	●	●	●	
Filtration maintenance	●	●	●	●	●	○	●	●	●	●	○	○	●	●	●	●	●	●	●	

Notice: applying the vacuum treatment please refer to Maintenance Instructions

[⋈] = Ball valve
[⋈] = Gate valve
[⋈] = Oil sample valve
[⋈] = Butterfly valve
▲ = Oil drain plug
▽ = Air vent plug
● = Position closed
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▶ = Residual oil drain device