220kV POWER TRANSFORMER

In 1969, XD produced its first 360MVA/220 kV power transformer for Danjiangkou hydroelectric power plant in Hubei province that was the largest transformer in China at that time. Since then, XD has for more than thirty years been making unremitting efforts to improve the technology of 220 kV power transformers and has already developed to be a leading supplier in the country.

By extensively applying the structure of full folding plate of pressed arch-type tank of 110 kV power transformer to 220kV power transformer, XD makes the structure of 220 kV products more reasonable and more compact and the outward appearance substantially novel and unique, which wins excellent reputation in the market. Besides, this structure is more convenience for customers in the aspects of assembling and lifting core for check on site.

Structure characteristics

- The tank is of bell type with the structure of full folding plate type, having an excellent exterior.
- Advanced core stacking technology with full-bevel joint, without hole and the upper yoke is adopted to control the tightening force of the core more effectively and reasonably and to lower the losses and noise.
- The core is fixed to the tank in all directions to guarantee the strong ability against impact during the transportation.
- The updated reliability program for electric calculation, and the qualitative and quantitative analysis for the distribution of the electric field intensity and the oil flow of the winding, are adopted to ensure the sufficient electric strength.
- Advanced technologies for the active part include complete assembly with multi-winding and drying under constant pressure, which ensure the winding to shrink uniformly with minimum restoration and effectively improve the electric strength and the ability to withstand short circuit.

1. OSFPSZ-240 MVA/275kV auto- transformer operating in Malaysia
2. SFPSZ10-K-250MVA/220kV power transformerfor Xidawang, Beijing
3. OSFPSZ-240 MVA/275kV auto- transformer operating in Malaysia

- High density of paper cylinder is used in internal diameter side of the winding close to the core, which results in a structure without clearance between the core and the winding that strengthens the strength of withstanding short-circuit impulse of winding.

Specification of 220kV Power Transformer(Two-Winding)

Type	Rated voltage (kV)		Connecting symbol	No-load loss (kW)	Load loss (kW)	Impedance %	Total weight (t)
	H.V	L.V					
SFP10-240 MVA/220 kV	242 ± 2 × 2.5%	15.75	YNd11	125	535	14	199
SFP10-370 MVA/220 kV	242 ± 2 × 2.5%	20	YNd11	165	670	14	247
SFP8-380 MVA/220 kV	242^{+3}_{-1} × 2.5%	18	YNd11	178	720	16	230
SFP9-420 MVA/220 kV	242 ± 2 × 2.5%	23	YNd11	190	840	14	257

Specification of 220kV Power Transformer(Three-Winding)

Type	Rated voltage (kV)			Connecting symbol	No-load loss (kW)	Load loss (kW)	Impedance %			Total weight (t)
	H.V	M.V	L.V				H-M	H-L	M-L	
SFPSZ9-120 MVA/220 kV	220 ± 8 × 1.25%	121	10.5	YNyn0d11	95	420	13.85	23.27	7.91	166
OSFPS9-120 MVA/220 kV	220 ± 2 × 2.5%	121	38.5	YNa0d11	50	285	8.2	28.8	17.8	128
OSFPSZ9-120 MVA/220 kV	220 ± 8 × 1.25%	121	38.5	YNa0d11	55	300	8.52	31.41	21.17	125
SFPS9-150 MVA/220 kV	220 ± 2 × 2.5%	121	38.5	YNa0d11	100	495	13.3	22.9	7.5	178
SFPSZ9-150 MVA/220 kV	220 ± 8 × 1.25%	121	10.5	YNyn0d11	105	500	13.6	23.33	7.85	185
SFPSZ-K-150 MVA/220 kV	220 ± 8 × 1.25%	121	11	YNyn0d11	85	580	15	45	28	200
SFSZ-K-180 MVA/220 kV	220 ± 8 × 1.25%	121	10.5	YNyn0d11	82	595	13	44	31	249
SFPSZ9-180 MVA/220 kV	220 ± 8 × 1.25%	121	10.5	YNyn0d11	130	550	12.93	22.6	7.92	210
OSFPSZ9-180 MVA/220 kV	220 ± 8 × 1.25%	121	10.5	YNa0d11	70	360	8.2	34.8	23.9	159
OSFPSZ-240 MVA/275 kV	275	132 ± 12 × 1.25%	38.5	YNa0d11	54.95	462.4	15.56	18.34	35.21	258
SFPSZ-K-250 MVA/220 kV	220 ± 8 × 1.25%	115	10.5	YNyn0d11	116	850	18	44	26	272

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