Amorphous alloy dry-type transformer

1. Product overview

The amorphous alloy dry-type transformer has the advantages of low no-load loss, being oil-free, flame-retardant, moisture-resistant, and maintenance-free. Currently, all the places where ordinary dry-type transformers are applicable are also suitable for amorphous alloy transformers. These places include airports, railway stations, urban subways, high-rise buildings, power plants, etc. It is especially suitable for places that are flammable, explosive, or short of electrical energy.

2. Functional features

(1) Low consumption and energy-saving: Soft magnetic permeable materials with isotropy are adopted, which have a small magnetization power, high resistivity, and low eddy current loss. The no-load loss and load current of the iron core made of amorphous alloy materials are very low, only one-third of those of silicon steel sheets, which can greatly reduce the operation cost and has a remarkable energy-saving effect.

(2) Strong corrosion resistance: The amorphous alloy iron core is fully encapsulated and treated with resin and high-temperature resistant silicone rubber, which effectively prevents rust and the shedding of amorphous alloy fragments, thus effectively protecting the iron core and coils.

(3) Low noise: In order to reduce the operation noise of the product, a reasonable working magnetic density is selected during product design. During product processing, the structure of the iron core and coils is improved, and special noise reduction materials are used, etc. The product noise is far lower than the requirements of the national standard.

(4) Strong short-circuit resistance: The product adopts a three-phase five-column structure, and the iron core is protected by a frame structure around it, with a compact and reasonable structure.

(5) Low temperature rise and long service life. The product has a low temperature rise and strong heat dissipation capacity, and can operate at 150% of the rated load under forced air cooling conditions. A complete temperature control and protection system with excellent performance can be optionally configured to provide a reliable guarantee for the safe operation of the transformer.

3. Main performance parameters

额定容量/kVA	电压组合			联结组标号	空载损耗/W	负载损耗/W			空载电流/%	短路阻抗/%
	高压/kV	高压分接范围/%	低压/kV			100℃ (B)	120℃ (F)	145℃ (H)		
30	6 6.3 6.6 10 10.5 11	±5 ±2×2.5	0.4	Dyn11	70	670	710	760	1.6	4.0
50					90	940	1000	1070	1.4	
80					120	1290	1380	1480	1.3	
100					130	1480	1570	1690	1.2	
125					150	1740	1850	1980	1.1	
160					170	2000	2130	2280	1.1	
200					200	2370	2530	2710	1.0	
250					230	2590	2760	2960	1.0	
315					280	3270	3470	3730	0.9	
400					310	3750	3990	4280	0.8	
500					360	4590	4880	5230	0.8	
630					420	5530	5880	6290	0.7	
630					410	5610	5960	6400	0.7	6.0
800					480	6550	6960	7460	0.7	
1000					550	7650	8130	8760	0.6	
1250					650	9100	9690	10370	0.6	
1600					760	11050	11730	12580	0.6	
2000					1000	13600	14450	15560	0.5	
2500					1200	16150	17170	18450	0.5	
1600					760	12280	12960	13900	0.6	8.0
2000					1000	15020	15960	17110	0.5	
2500					1200	17760	18890	20290	0.5	

Advanced Production Equipment

GNEE Steel Group owns a full set of shearing, packaging, vacuum casting, vacuum impregnation, and testing stations that represent the high level of the industry. These top-notch production and testing equipment guarantee the creation of first-class products. The company continuously improves its design methods, achieving the most advanced computer-aided design to meticulously craft perfect products.

Production Environment

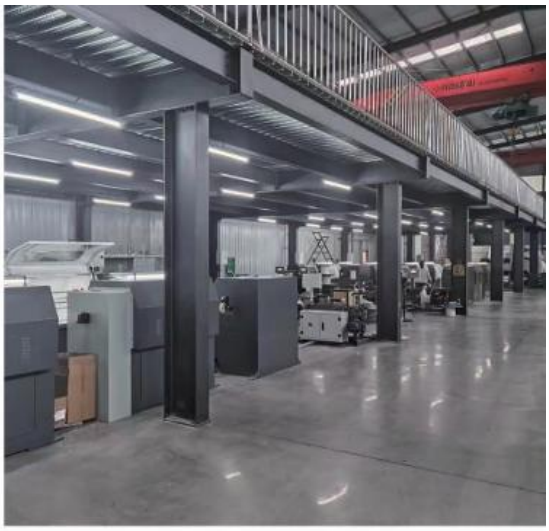
The workshop of GNEE Steel Group has strict process management and a closed management system. Regular purification and dust removal tests are conducted to meet the necessary requirements for producing high and low voltage transmission products. It has also passed ISO9001 quality certification and third-party inspection certification for international bidding.

Autonomous Raw Material Supply

The iron cores and electromagnetic wires used in our company's products are all produced independently, which allows better control over the quality and delivery time of raw materials while reducing product costs.




Raw Material Production Environment

INTIMATE COMMUNICATION

Pre-sale, during-sale, and after-sale, we are with you every step of the way.

As long as you get in touch with us, we will communicate with you sincerely. Pre-sale, we will provide you with relevant product information; if you have special requirements, we can develop according to your needs and propose solutions under mutual recognition; during-sale, we will keep in touch with you throughout the process and inform you of the production progress, strictly following all the requirements in the contract; after-sale, our comprehensive "three guarantees" service system will ensure that you use our products with comfort, confidence, and satisfaction.

Inspection, Training, Guidance - All Free Of Charge.

As long as you are interested in our products and get in touch with us, we will take the initiative to contact you and arrange free inspections and factory experiences. We can also dispatch technical personnel to provide you with a free customized overall solution. Before the implementation of the solution, we will offer free training for your technical staff to inform them of the relevant knowledge about installation, commissioning, and maintenance of the product. During the equipment installation process, we will also provide you with free installation guidance. As long as it is your requirement, it is our mission; we will provide you with perfect services throughout the entire process.

Power Supply System Solutions Equipment Provider

Real Estate Development

In real estate development, container substations are widely used. In addition to short construction periods, low investment, small land occupation, and a new and beautiful appearance, the greatest advantage of this transformer is that it is installed in a moisture-proof, anti-corrosion, dust-proof, fire-proof, theft-proof, heat-insulating, fully enclosed, and mobile steel structure box. It integrates electromechanical equipment and runs fully enclosed, ensuring safety and long-term usability.

Industrial Enterprises

The fully sealed oil-immersed power transformer has the advantages of low loss, low noise, and high efficiency, which can achieve good energy-saving effects and reduce pollution. Compared with ordinary oil-immersed transformers, fully sealed transformers eliminate the need for an oil reservoir, and the changes in oil volume are automatically compensated by the elasticity of the corrugated oil tank's corrugated plates. The transformer is isolated from the air, preventing and slowing down the aging of oil and insulation, enhancing operational reliability, and requiring no maintenance during normal operation. Epoxy resin cast dry-type transformers can be used as updated replacement products for oil-immersed distribution transformers and are the best-performing products among various two-type transformers. They are particularly suitable for urban grids, high-rise buildings, business centers, theaters, hospitals, hotels, tunnels, subways, underground stations, laboratories, stations, docks, airports, combined substations, and other important places.

Oil Fields and Mines

High-efficiency energy-saving adjustable capacity transformers are designed based on the working characteristics of oil field pumping units. When the pumping unit starts, the transformer's output voltage is the rated input voltage of the motor, ensuring that the pumping unit has sufficient starting torque. After the pumping unit starts and enters the normal state, the control system will detect the size of the effective power consumed by the motor through sensors and feed it back to the microcomputer intelligent control system. Through calculations, it automatically adjusts the output voltage and capacity of the transformer, then detects, records, and compares the effective power consumed by the motor on the pumping unit, eventually finding the operating point where the consumption of effective power is minimal, achieving the purpose of energy saving. In terms of structural design, strong anti-theft measures have been taken, effectively preventing the theft of high-efficiency energy-saving transformers. At the same time, during the

energy-saving operation of the pumping unit, according to the set anti-electricity theft time method, the output voltage fluctuates, making it impossible for home appliances to function even if the electricity is stolen back. Therefore, the transformer has high-performance anti-theft functions.