

Rotating Excitation Rectifier Assemblies for Turbine Generators

旋转励磁整流组件（大型发电机用）

Introduction

Our main products are brushless excitation rectifier assemblies used for 10~1350MW turbine generator.

The brushless excitation technology can be widely used for generator and motor, especially large generator. Due to the integration of rectification components and exciter rotor, they are synchronous revolution and remove the commutator, slip-ring and carbon brush, which are the unsurpassable advantages of brush excitation.

Rotating rectifier excitation assembly is comprised of rectifier, capacitor, fuse, heat sink, conduct piece, insulation component, fastener and other main devices and components. It has the advantages of small size, enhanced functions, high technology content.

Features

- High reliability, no required maintenance for slip-ring and carbon brush.
- Long insulation life, no pollution on generator field coil caused by carbon powder and copper powder.
- Suitable for working in harsh environment, no friction spark.

概述

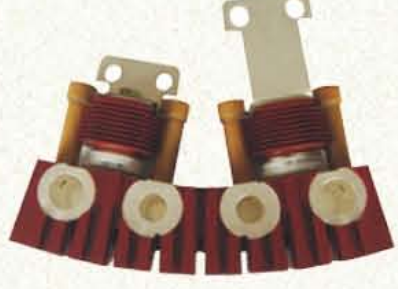
本公司的主要产品是10~1350MW汽轮发电机用无刷励磁整流组件系列。无刷励磁技术广泛应用于发电机和电动机，特别是大型发电机。由于整流组件与机组的励磁机转子固定一体，同步旋转，省去了整流子、滑环和碳刷，因此具有有刷励磁无法比拟的优越性。

特点

- 不需要对滑环和碳刷的维护，可靠性高；
- 没有碳粉盒铜末引起的电机线圈的污染，绝缘寿命长；
- 不产生摩擦火花，适于在恶劣的环境中运行。

Classification table No.1 of rotating excitation rectifier assemblies

旋转励磁整流组件规格表1

 Rotating excitation assembly of 1350MW turbine generator (2-rectifiers, series) 1350MW 汽轮发电机旋转励磁整流组件 (2支整流管, 串联)	 Rotating excitation assembly of 1000MW turbine generator (2-rectifiers, parallel) 1000MW汽轮发电机旋转励磁整流组件 (2支整流管, 并联)
 Rotating excitation assembly of 600MW turbine generator (2-rectifiers, parallel) 600MW汽轮发电机旋转励磁整流组件 (2支整流管, 并联)	 Rotating excitation assembly of 300MW turbine generator (2-rectifiers, series) 300MW 汽轮发电机旋转励磁整流组件 (2-整流管, 串联)
  Rotating excitation assembly of 50~150MW air-cooling turbine generator (1-rectifier) (2-rectifiers, series) 50~150MW空冷汽轮发电机旋转励磁整流组件 (1-整流管) (2-整流管, 串联)	 Rotating excitation assembly of 30MW turbine generator 30MW汽轮发电机旋转励磁整流组件

Classification table No.2 of rotating excitation rectifier assemblies

Name	Rectifier						Assembly			
	Rated Current A	Rated Voltage V	Forward Voltage V	Centrifugal Acceleration g	Tangential Acceleration g	T _{jm} ℃	Application	Structure	Constitution	Rotating Speed r/min
Rotating excitation assembly of 1350MW turbine generator	1500	2000	1.20±0.025	3000	±500	175	1350MW nuclear exciter	2 rectifier plates, 96 components	rectifier, capacitor, fuse, heat sink, conduct piece, insulation component, fastener and protection circuit	3000 (long time) 3300 (1min) rotating plate diameter 1m
Rotating excitation assembly of 1000MW turbine generator	1000	2600	1.55	3000	±500	175	Rotating exciter of 1000MW turbine generator	1 rectifier plate, 60 components		
Rotating excitation assembly of 600MW turbine generator	400	2000	1.20±0.025	6000	±500	175	Rotating exciter of 600MW turbine generator	1 rectifier plate, 48 components		
Rotating excitation assembly of 300MW turbine generator	400	2000	1.20~1.25 ±0.025	6000	±500	175	Rotating exciter of 300MW turbine generator	1 rectifier plate, 24 components		
Rotating excitation assembly of 50~150MW turbine generator	400	2000	1.20~1.25 ±0.025	6000	±500	175	Rotating brushless exciter of 50~150MW air-cooling turbine generator	Each power unit can organize an independent rectifier bridge arm	non -R&C protection	3000 (long time) rotating plate diameter 755.64 mm
Rotating excitation assembly of 30MW turbine generator	400	2000	1.20~1.25 ±0.025	6000	±500	175	20~30MW turbine generator use for municipal solid waste or waste heat as energy	Each power unit can organize an independent rectifier bridge arm	rectifier, heat sink, conduct piece, insulation component, fastener and protection circuit	3000 (long time) 3600 (1min) rotating plate diameter 800mm

旋转励磁整流组件规格表2

产品名称	整流器						组件			
	额定电流 A	额定电压 V	正向压降 V	离心加速度耐量 g	切向加速度耐量 g	T _{jm} ℃	应用	结构	组成	转速 r/min
1350MW 汽轮发电机励磁整流组件	1500	2000	1.20±0.025	3000	±500	175	1350MW 核电励磁机	2 个整流盘, 96 只组件	整流器、电容器、熔断器、散热器、紧固件、绝缘件、导电导热件和保护电路	3000（长期） 3300（1分钟） 旋转盘直径 1m
1000MW 汽轮发电机励磁整流组件	1000	2600	1.55	3000	±500	175	1000MW 汽轮发电机励磁机	1 个整流盘, 60 只组件		
600MW 汽轮发电机励磁整流组件	400	2000	1.20±0.025	6000	±500	175	600MW 汽轮发电机励磁机	1 个整流盘, 48 只组件		
300MW 汽轮发电机励磁整流组件	400	2000	1.20~1.25 ±0.025	6000	±500	175	300MW 汽轮发电机励磁机	1 个整流盘, 24 只组件		
50~150MW 空冷汽轮发电机励磁整流组件	400	2000	1.20~1.25 ±0.025	6000	±500	175	50~150MW 空冷发电机励磁机	每个单元构成一个独立的整流桥臂	无 R&C 保护	3000（长期） 旋转盘直径 755.64mm
30MW 汽轮发电机励磁整流组件	400	2000	1.20~1.25 ±0.025	6000	±500	175	20~30MW 以生活垃圾或余热为能源的汽轮发电机	每个单元构成一个独立的整流桥臂	整流器、熔断器、散热器、紧固件、绝缘件、导电导热件和保护电路	3000（长期） 3600（1分钟） 旋转盘直径 800mm