# 脱硫泵 FGD Pump



石家庄麦恩特渣浆泵有限公司 SHIJIAZHANG MAINTE SLURRY PUMP CO.,LTD

# 公司简介

石家庄麦恩特渣浆泵有限公司是集科研、设计、制造于一体的脱硫泵、渣浆泵、单级离心泵、污水泵、潜水泵、石油化工用泵专业生产基地。公司下设铸造车间、机加车间、装配车间、试泵站,年生产能力1300台(套),主要为环境保护工程、火电烟气脱硫、冶金、矿山、电力、煤炭、疏浚、污水处理、城市给排水、各种水利工程、建材等企事业单位提供各种配套泵类产品与系统;同时提供阀门、控制柜等系列产品。产品以国产精品的形象畅销全国各地,产品已出口俄罗斯、北美、欧洲、非洲、东南亚、中东等二十多个国家和地区。

石家庄麦恩特渣浆泵有限公司现有职工110余人。其中,工程技术人员26人,约占职工总数的20%;各类专业技术人员中具有中高级职称的7人;中高级技术工人80人。

公司将围绕市场需求,进一步调整产品结构,研制开发了用于脱硫、填海造田与挖泥船配套的挖泥泵、渣浆泵、砂砾泵,研制开发了乙烯、复合化肥等三大化工所需配套用泵。产品继续向精品化、集成化方向发展,形成了多产品生产优势。企业将在国内名牌的基础上,向国际化名牌迈进,成为国际一流水平的脱硫泵、渣浆泵、清水泵、污水泵和潜水泵科研、生产型公司。

Shijiazhuang Mainte Slurry Pump Co., Ltd. is a professional production base of desulfurization pump, slurry pump, single-stage centrifugal pump, sewage pump, submersible pump and petrochemical pump, which integrates scientific research, design and manufacture. The company has foundry workshop, machine-adding workshop, assembly workshop and test pump station with an annual production capacity of 1300 units. It mainly provides various pump products and systems for enterprises and institutions such as environmental protection engineering, thermal power flue gas desulfurization, metallurgy, mining, power, coal, dredging, sewage treatment, urban water supply and drainage, various water conservancy projects, building materials, etc. Meanwhile, it also provides valves, control cabinets. A series of products. The products have been exported to more than 20 countries and regions such as Russia, North America, Europe, Africa, Southeast Asia, Middle East and so on.

Shijiazhuang Mainte Slurry Pump Co., Ltd. has more than 110 employees. Among them, there are 26 engineers and technicians, accounting for about 20% of the total number of workers; among all kinds of professionals and technicians, there are 7 middle and senior titles; and 80 middle and senior technicians.

The company will further adjust the product structure around the market demand, develop the dredging pumps, slurry pumps and gravel pumps for desulfurization, land reclamation and dredger matching, and develop the matching pumps for ethylene, compound fertilizer and other three major chemical industries. Products continue to develop towards high-quality, integrated direction, forming the advantages of multi-product production. On the basis of domestic famous brands, the company will march towards international famous brands and become a first-class international company for research and production of desulfurization pumps, slurry pumps, water pumps, sewage pumps and submersible pumps.

## TL(R)系列脱硫泵

#### 概述

TL(R)系列脱硫泵为单级单吸卧式离心泵,主要为作为湿法FGD装置中吸收塔循环泵使用,具有流量范围宽、高效节能等优点。该系列泵配有结构紧凑的X型托架,可大大节约占地空间。同时,我公司针对脱硫系统用泵特点开发了多种材料。

#### General

Series of TL FGD pump is a single stage single suction horizontal centrifugal pump. It is mainly used as the circulating pump for absorbent tower in FGD appliances. It has such features: wide rang flowing capacity, high efficiency, high saving power. This series of pump is matched by tight structure X bracket which can save much space. Meanwhile our company develops many kinds of material targeted on the pump for FGD.

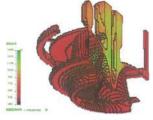


600X-TLR 即为排出口直径600mm, 橡胶内衬, 轴承润滑方式为稀油润滑。600X-TL 即为排出口直径600mm, 金属内衬, 轴承润滑方式为稀油润滑。

#### Sample

600X-TLR The diameter of discharge: 600mm, Rubber liner, bearing lubricating way:diluted oil.

600X-TL The diameter of discharge: 600mm, Metal liner, bearing lubricating way:diluted oil.



600TL叶轮凝固CAE 600TL Impeller Concreting CAE



叶轮三维造型 Impeller Modeling by 3-Dimension



#### 技术特点

泵过流部件采用先进的CFD流动模拟分析技术,使其设计可靠,运行效率高。

调节轴承组件可改变叶轮在泵腔中的位置, 使泵机组始终处于高效运行状态。

泵为后拆式结构,结构简单,维修方便,无需拆卸泵的进出水管路。

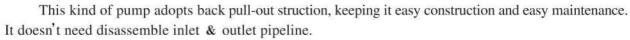
泵端采用双列圆锥滚子轴承,驱动端采用圆柱滚子轴承,轴承采用稀油润滑,改善了轴承工作 条件,大大提高了轴承的寿命。

机械密封采用专用脱硫工艺的集装式机封,运行可靠。

### **Technology Features**

The pump wet parts are designed by advanced CFD Flowing Simulating Analysis Techniques to ensure its design reliable and its working effective.

It can change the impeller's position in pump casing by adjusting the bearing assembly to keep the pump working high efficiently all the time.



Two sets of taper roller bearing is fixed in the end of the pump, the column roller bearing is equipped at driving end. The bearing is lubricated by oil. All these can improve the bearing working condition and greatly enhance its life.

Mechanical sealing is adopted integrating mechanical sealing which is specialized in FGD technology to ensure its operation.

#### 材料的选用

我公司专门为FGD装置开发研制了一种新型耐腐抗磨材料,该材料具有双相不锈钢的耐腐蚀性和 高铬白口铁的耐磨性,使其在FGD流程中具有显著的耐腐抗磨蚀性。

泵体、泵盖和接合板为承压件,采用球墨铸铁;

胶泵结构中: 叶轮、吸入盖、前护板为专用耐腐抗磨材料,前护套、后护套、后护板的材料为天 然橡胶,具有天然的良好的耐腐蚀性能,且重量轻,成本相对较低,特别是运行寿命长,生产维护成 本低。

金属结构中: 叶轮、护套、前护板、后护板为专用耐腐抗磨材料, 吸入盖为球铁衬胶或金属材料。

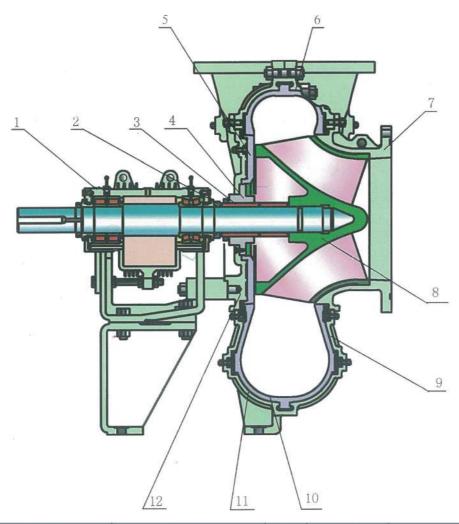
#### Material Selection

Mainte has developed a new kind of specialized anti-wear and anti-corrosive material which possesses the duplex stainless steel's anti-corrosive property and the high chrome white iron's anti-abrasive property in FGD process.

In the rubber pump casing, impeller, suction cover/cover plate are all made of specialized antiwear and anti-corrosive material; the material of front liner, back liner and back liner insert are natural rubber with light weight and natural, having excellent anti-corrosive property and low cost.

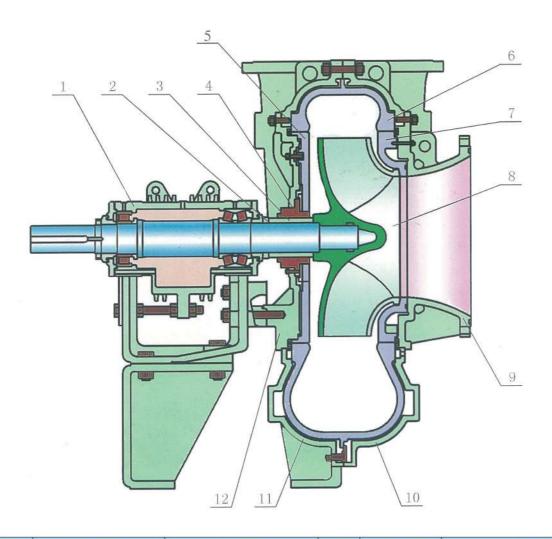
In metal pump casing, impeller, volute liner, suction plate and back plate are all made of specialized anti-wear and anti-corrosive material, the suction cover are made of ductile iron with rubber.

TLR系列脱硫泵结构图 The Construction Diagram of TLR Series FGD Pump



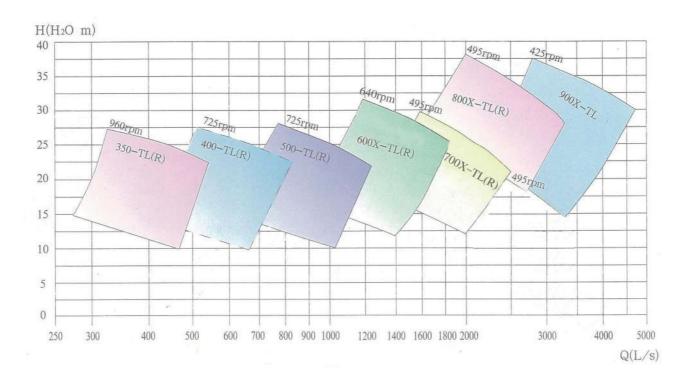
序号 NO.	名 称 Name	材 料 Material	序号 NO.	名 称 Name	材 料 Material
1	托架 Bracket		7	吸入盖 Suction Cover	专用耐磨耐腐材料 Specialized anti-wear and anti- corrosive material
2	叶轮拆卸环 Impeller Disassembling Ring	专用不锈钢 Specialized Stainless Steel	8	叶轮 Impeller	专用耐磨耐腐材料 Specialized anti-wear and anti- corrosive material
3	轴套 Shaft Sleeve	ZG0Cr18Ni12Mo2Ti	9	泵盖 Top Casing	QT500-7
4	机械密封 Mechanical Sealing	316L	10	后护套 Back Plate Liner	天然橡胶+A3 Natural Rubber+A3
5	后护板 Back Plate Liner	天然橡胶+A3 Natural Rubber+A3	11	泵体 Pump Casing	QT500-7
6	前护套 Front Plate Liner	天然橡胶+A3 Natural Rubber+A3	12	接合板 Adaptor Plate	QT500-7

TL系列脱硫泵结构图 The Construction Diagram of TL Series FGD Pump



序号 NO.	名 称 Name	材 料 Material	序号 NO.	名 称 Name	材 料 Material
1	托架 Bracket		7	前护板 Front Plate Liner	专用耐磨耐腐材料 Specialized anti-wear and anti- corrosive material
2	叶轮拆卸环 Impeller Disassembling Ring	专用不锈钢 Specialized Stainless Steel	8	叶轮 Impeller	专用耐磨耐腐材料 Specialized anti-wear and anti- corrosive material
3	轴套 Shaft Sleeve	ZG0Cr18Ni12Mo2Ti	9	吸入盖 Suction Cover	QT500-7+橡胶 QT500-7+Rubber
4	机械密封 Mechanical Sealing	316L	10	泵盖 Top Casing	QT500-7
5	后护板 Back Plate Liner	专用耐磨耐腐材料 Specialized anti-wear and anti- corrosive material	11	泵体 Pump Casing	QT500-7
6	护套 Liner	专用耐磨耐腐材料 Specialized anti-wear and anti- corrosive material	12	接合板 Adaptor Plate	QT500-7

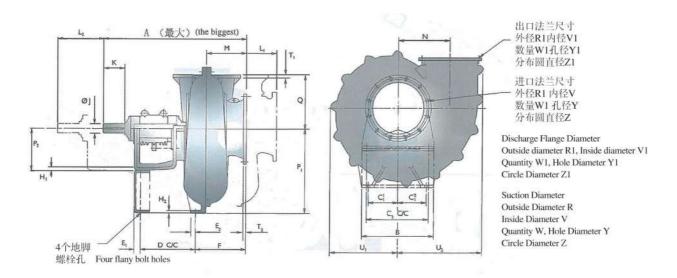
TL(R)系列脱硫泵型谱(仅供初步选用)
Performance Range of Series of TL(R) FGD Pump(only of the first choice)



TL(R)系列脱硫泵基本参数 Basic Performance of Type TL(R) Pump

型 号	流量 Capa		扬程	转速	效率	必需汽蚀余量	排出口直径/吸入口直径 Suction D/Discharge D mm/mm		
400X-TL(R)	m³/h	1/s	Head m	Speed r/min	Efficiency %	NPSHr			
350X-TL(R)	1600	444	25	960	82	4.5	350-400		
400X-TL(R)	2500	694	25	725	83	5.0	400/450		
500X-TL(R)	3750	1040	25	725	85	5.0	500/500		
600X-TL(R)	6300	1750	29.7	640	88	5.5	600/700		
700X-TL(R)	6840	1900	26	485	87	6.0	700/800		
800X-TL(R)	9360	2600	31	485	90	7.0	800/900		
900X-TL(R)	15000	4167	30	485	90	8.5	900/1000		

### TL(R)系列脱硫泵安装尺寸图 Installation Dimension Diagram of Type TL(R)FGD Pump



泵型号 Pump Type			安装	麦尺寸	† Inst	allation		4	地脚螺 栓孔**	重量								
	A	B**	C 1	C 2	C2	D	E <sub>1</sub>	$E_2$	F*	$H_1$	H <sub>2</sub>	ФЈ	K	键尺寸 Key Dimension	L	$L_2$	Foot Polt	(Kg) Weight
350X-TL(R)	1450	660/1040	390	490	560	589	90	302	340	25	30	85.03 85.01	218	22	160	360	Ф28	1850
500X-TL(R)	1773	100/960	425	425	850	652	110	551	595	35	40	120.03 120.01	210	32	150	400	Ф42/Ф40	4000
600X-TL(R)	1855	960	425	425	850	670	110	50	667	35	40	120.03 120.01	284	32x18	330	610	Ф39	4575
700X-TL(R)	2315	1300	550	730	1100	895	130	75	768	40	45	150.040 150.015	355	36x20	375	720	Ф51	7280
800X-TL(R)	2460	1300	550	550	1100	885	135	75	933	40	45	150.04 150.01	355	36x20	550	800	Ф51	8300
900X-TL(R)	2516	1350	575	575	1100	900	130	75	960	40	45	150.04 150.01	355	36x20	550	900	Ф51	10720

		安装尺寸 Installation Diameter										进口法兰 Suction Flange						出口法兰 Discharge Flange					
泵型号 Pump Type	M*	N	<b>P</b> <sub>1</sub>	P <sub>2</sub>	Q+	T <sub>1*</sub>	T <sub>2*</sub>	Uı	U <sub>2</sub>	R	v	w	Y	z	R <sub>1</sub>	$\mathbf{v}_{i}$	Wı	<b>Y</b> 1	Zı				
350X-TL(R)	340	430	700	400	505	50	38	559	728	580	400	16	30	525	580	350	14	30	525				
500X-TL(R)	421	580	950	500	665	60	44	735	946	715	500	20	33	650	715	500	18	33	65				
600X-TL(R)	525	700	1050	500	775	48	40	901	1155	910	600	24	30	840	840	600	18	36	770				
700X-TL(R)	583	780	1290	700	930	68	60	1080	1350	1025	768	24	40	950	1025	700	22	40	950				
800X-TL(R)	712	930	1400	700	985	62	62	1141	1493	115	900	28	40	1050	1125	800	26	40	1050				
900X-TL(R)	760	1075	1620	700	1050	70	70	1410	1765	1375	1000	28	51	1250	1330	900	28	51	1210				

<sup>\*:</sup> 处尺寸包括放入橡胶密封垫的尺寸 The dimensions comprise the dimension put into rubber sealing pad

<sup>\*\*:</sup> 托架/泵体 Bracket/Casing

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