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SQJB Hyperboloid Mixer

SQJB 双曲面搅拌机

Lamsun Fluid Technology Pte.Ltd.

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Due to constantly progressive technology,Lamsun Group has the right to amend the design,without prior notice.LS1405

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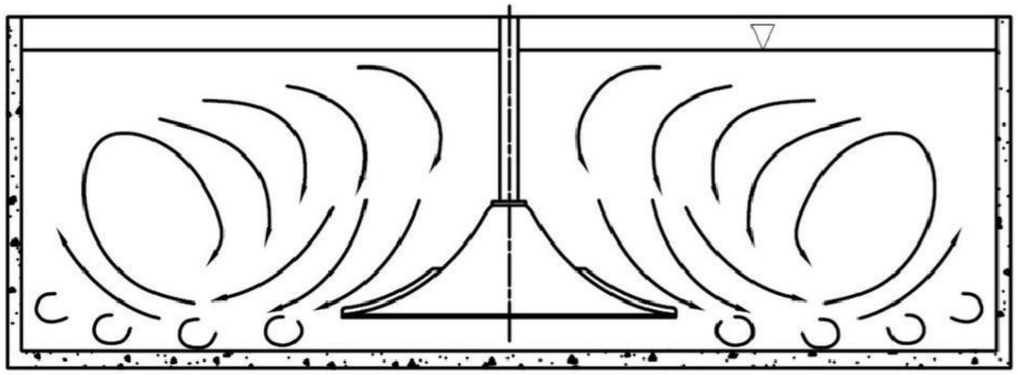
设备简介
Equipment Introduction

SQJB 型双曲面搅拌机是我公司技术中心自主研究开发的新一代的高科技产品，在总体结构和水力设计上大胆创新，是运用CFD流场分析技术、有限元分析法等先进设计理念和方法对传统混合搅拌设备的一次创新。

SQJB dual surface mixer is my own company's technology research and development center of a new generation of high-tech products,the overallstructure and the hydraulic design of bold innovation,is to use CFD flow analysis,finite element analysis and other advanced design concepts and methods in a traditional mixer innovation.



SQJB 型双曲面搅拌机的叶轮采用先进的一次成型工艺，表面光滑，线型及流态完美，具有强度高、耐腐蚀的特性，同时阻力小，效率高。采用干式安装，配套的电机及减速机置于液体的上方，不接触液体，水下无易损件，具有较长的使用 寿命，是各种液体搅拌的理想设备。

SQJB dual impeller mixer surface in amolding process using advanced,the surface smooth,linear and perfect flow,high strength,corrosion resistance properties,and resistance,and high efficiency.By dry-mounted,matching the motor and reducer placed above theliquid does not contact with liquid,water no wearing parts,with a long service life,is ideal for a variety of liquid mixing equipment.

型号表示方法
Type and its indication

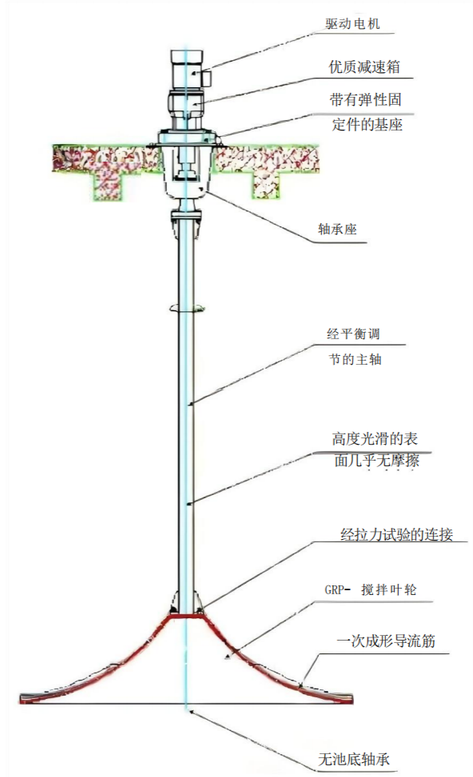
叶轮的直径mm(Impeller diameter)

双曲面搅拌机 (Hyperboloid mixer)

设备构造及工作过程
Device structure and working process

SQJB型双曲面搅拌机结构简单，安装方便，如下图所示由驱动部件、基座、主轴、叶轮和电控等组成。设备安装在水池上方的固定基座上，通过碳钢或不锈钢的传动轴，联接水下的搅拌叶轮。搅拌叶轮近地布置，通过改变传动轴的长度，适应不同深度的水池。

SQJB dual surface mixer simple structure,easy installation,as shown by the drive components,base,shaft,impeller and electric control ete.Equipment installed in the pool at the top of the fixed base,through carbon steel or stainless steel shaft,connecting underwater mixing impeller.Mixing near the impeller arrangement,by changing the length of shaft,To adapt to different depths of the pool.



※ 驱 动 部 件
Drive components

驱动部件由电机和优质减速箱以及传动轴组成，驱动形式采用斜齿轮减速机。其能耗低，性能优越，震动小、噪音低。斜齿轮采用锻钢材料，表面经过渗碳硬化处理；经过精密加工，确保轴平行度和定位的精度，使用寿命长。传动轴承为优质产品，确保平稳长久运行。电机为IEC标准电机，户外型，防护等级IP55,绝缘等级F级 。

Drive motor and high-quality parts from the gear box and shaft component,driven by the form of helical gear reducer.Its low energy consumption,superior performance,small vibration and low noise.Helical gears are orged steel material,the surface after carburizing hardening;through precision machining,to ensure the axis parallel to the degree and positioning accuracy,long servicelife.Transmission shaftfor the quality products,to ensure asmooth long run.Motor for the IECstandard motor,outdoor type,protection class IP55,insulation class Fclass.

※ 基 座
Base

驱动部件固定在一个带有减震装置的基座上，用来消除设备运转时产生的震动，并能纠正由于水流产生的轴向力。

Drive components are fixed with a shock absorber on the base,to eliminate the vibration generated when the equipment operation,and to correct the axial force generated as water.

※ 主 轴
Spindle

主轴是驱动部件与叶轮之间的连接件，经过校直和一次成形加工，保证其极好的直线度，根据用户需要，可采用碳钢重防腐、碳钢包玻璃钢和不锈钢材质等高强度耐腐蚀材料，以满足刚性和强度。

Impeller shaft is driven between the components and connectors,through the alignment and aforming process,to ensure its excellent linearity,according to user needs,can use heavy duty steel,glass,steel and stainless steel package high-strength corrosion-resistant material materials to meet the stiffness and strength.

※ 叶 轮
Impeller

SQJB 型双曲面搅拌机独特的叶轮结构设计，最大限度地将流体特性与机械运动完美地结合。双曲面叶轮表面的流线完全为切线组合，整个表面为绕传动轴中心旋转而成的双曲面体；为了迎合水体流动，设计从叶轮的中心进水，这一方面减少了进水紊流，另一方面保证了液体对叶轮表面的压力均匀，有利于水的流动，减轻了整机运转中的振动，保证整机在运动状态下的平衡。在渐开双弧面上均布有导流叶片，借助液体自重压力作补充进水获得的势能与叶轮旋转时产生的离心力形成动能，液体在重力加速度的条件下沿叶轮圆周方向作切线运动，在池壁的反射作用下，形成自下而上地循环水流。正是由于双曲面搅拌机叶轮的结构特性和接近池底安装的特点，决定了它在工作中可获得理想的搅拌效果，形成均匀的全向 推流，能有效地消除搅拌死角，达到理想的混合和搅拌效果。

SQJB unique dual impeller mixer surface structure design,to maximize the fluid properties and mechanical movement combines. Hyperboloid impeller surface flowline completely tangent portfolio,the entire surface of the center of rotation around the drive shaft made of double-curved surface;order to meet the water flow,the design center of water from the impeller, reducing water turbulence in this regard,On the other hand, to ensure that the liquid pressure on the impeller surface uniformity,favorable waterflows,reducing the vibration machine in operation to ensure the machine in motion state of balance.Involute arc in both double cloth with guide vanes,the pressure to add weight with liquid water potential energy obtained with the impeller rotating centrifugal force generated by the formation of kinetic energy when the liquid under the conditions in the acceleration of gravity along the circumferential direction as the impeller tangential movement reflection in the pool wall under the action of the formation of circulating water flow from the bottom up.Itis precisely because the structure of double-curved impeller mixer features and close to the bottom of the poolinstall,is determined by its work,get good stirring effect to form a uniform omni plug flow,can effectively eliminate stir dead,the desired Hunhe and mixing effects.

设备特点
Features

双曲面搅拌机改变了常规搅拌机在搅拌池内的流速不均匀、存在搅拌死角、容积利用率较低的缺点，在池中产生均匀的底部全向推流，无死角、无沉淀，且水面平静，无空气进入水中；搅拌叶轮外形完美，双曲面设计，采用非叶片结构，不会产生在搅拌机上挂带任何杂物，也不会产生纤维缠绕，故平时运行时不需进行任何的维护。

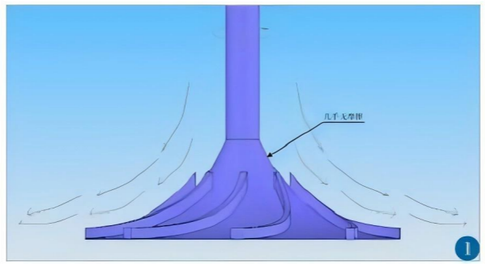
叶轮低转速、低磨损，抗腐蚀性好，故性能可靠，使用寿命长。与常规搅拌机相比，该大容量全向推流的双曲面搅拌机，能耗较低，搅拌1立方米污水一般只需要3~4瓦，节能达30%~50%。

Hyperboloid mixer to changemixerin the mixing tanks of conventional uniform velocity,there is mixing dead,the volume utilization is low,even in the bottom of the pool llto generate plug flow,no dead ends,no precipitation,and the water calm,no air into the water;mixing impeller perfect shape,double-surface design,use of non-leaf structure,does not produce any debris in the mixer to hang with,can not produce filament-wound,it usually runs without any maintenance.

Low impeller speed,low wear,good corrosion resistance,so reliable,long service life.Compared with the conventional mixer,all to promote the flow of high-capacity dual-surface mixer,low energy consumption,mixing I cubic meter of sewage usually require only 3 to 4 watts,saving 30%to 50%.

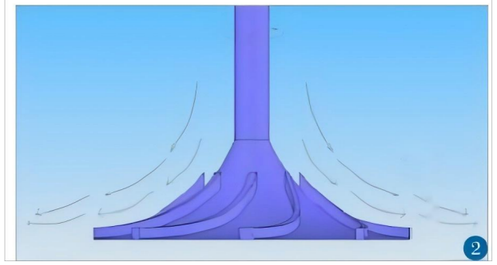
双曲面搅拌机与其它搅拌设备相比的不同之处在于：

Hyperboloid mixer and mixing equipment other than the difference is:



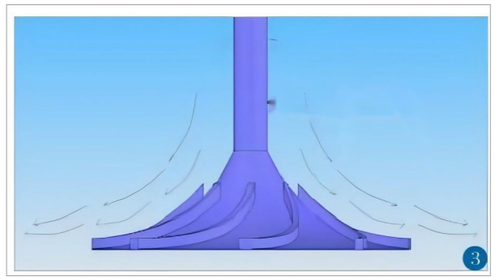
1. 由于流体条件趋于理想，所以能耗较低。

1. As conditions become ideal fluid,so the lower energy consumption.



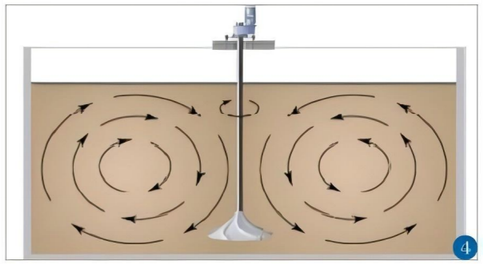
2. 由于整个池内水流流速高，所以污泥不 会有污泥沉淀。

2. As the entire pool of high flow velocity, so there will be no sludge settling sludge.



3. 搅拌器运行时能自我纠位，可以确保向 下力垂直，从而防止不平衡运动。

3.Stirrer run self-correcting bits,you can ensure that the downward vertical force, to prevent uneven movement.



4. 全向推流，池内各区都能被均匀搅拌，不会产生死角。

4. All the plug-flow,the pool can be evenly mixed district will not result in dead ends.