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NANHAIYA PLASTIC MACHINERY
舟山南海亚塑料机械有限公司

SCREW BARREL



致力高精度超耐磨机筒螺杆生产
NANHAIYA devotes itself to
producing high-precision
and high wear-resisting screw barrel.

Conical twin screw barrel

锥形双螺杆机筒



产品技术指标 Product technical index

- 1、国产38CrMoAlA材质，经调质氮化处理，表面硬度HV860-1000，氮化深度0.5-0.8mm，脆性≤2级。
- 2、进口高强度合金钢材质，螺杆易损部位等离子堆焊镍基、钼基合金1-1.5毫米厚，使用寿命提高1.5倍以上。

1. Nitrided screw and barrel:

Material: 38CrMoAlA

Surface hardness: HV860-1000

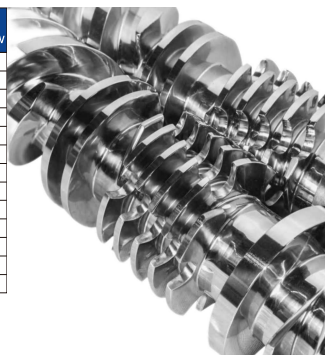
Nitriding depth: 0.5-0.8mm

2. Bimetallic screw and barrel

产品规格 Product specifications

螺杆规格(d/D) specification	工作长度(mm) Working length	挤出能力(Kg/h) Extrusion ability	螺杆转速(rpm) Rotation speed of screw
Φ35/Φ77	810	40-70	5-50
Φ45/Φ90	990	50-80	5-45
Φ50/Φ105	1070	100-150	4-45
Φ51/Φ105	1220	100-150	4-45
Φ55/Φ110	1220	120-180	4-40
Φ60/Φ125	1320	150-200	4-40
Φ65/Φ120	1440	200-250	4-40
Φ65/Φ132	1440	200-250	4-40
Φ70/Φ140	1460	220-300	4-40
Φ75/Φ150	1480	250-300	4-35
Φ80/Φ143	1800	300-360	4-35
Φ80/Φ156	1660	300-360	4-35
Φ92/Φ188	2000	400-500	4-35

合金层
Bimetallic alloy layer



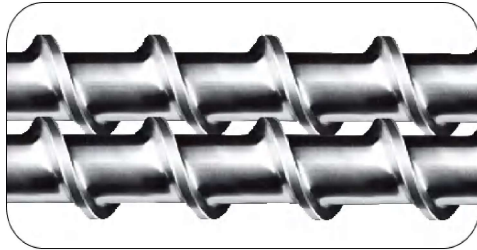
Conical twin screw barrel

锥形双螺杆机筒



Bimetallic screw barrel

双合金螺杆机筒



用途区分:

各种立式、卧式射出机、挤出机、注塑机、电木机、橡胶筒、吹膜机等。

产品应用范围:

适用于LCP, PA+GF, PET+GF, PBT+GF, PC+GF等各类塑料添加玻璃纤维、防火剂、碳粉及PPA, PPO, LCP,磁粉, PC等特殊工程塑胶。

加工范围:

双合金螺杆: 外径: $\Phi 15\text{mm}-\Phi 360\text{mm}$; 有效长度: 10000mm

双合金料管: 内径: $\Phi 14\text{mm}-\Phi 200\text{mm}$; 有效长度: 6000mm

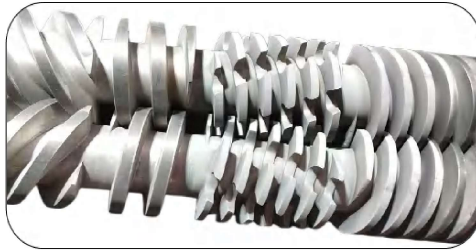
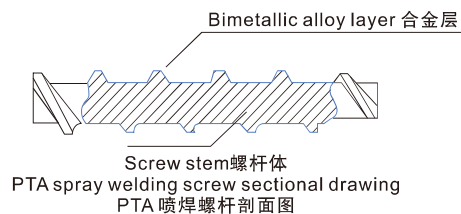
皮膜密度: 98-99.8%

硬度: Hv1100-1400C

密著强度: 10000Psi 以上

双金属机筒: 母材38CrMoAlA, 40Cr, 42CrMo

双金属螺杆: 母材38CrMoAlA, 31CrMoV9(国外)



Distinction of uses:

All kinds of vertical, horizontal injection machine, extruder, injection molding machine, bakelite machine, rubber cylinder, film blowing machine, etc.

Field of application:

It is suitable for LCP, PA + GF, pet + GF, PBT + GF, PC + GF and other plastics to add glass fiber, Fire retardant, carbon powder and PPA, PPO, LCP, magnetic powder, PC and other special engineering plastics.



Processing area:

Double alloy screw: outer diameter: $\Phi 15\text{mm} - \Phi 360\text{mm}$; effective length: 10000mm

Double alloy material pipe: inner diameter: $\Phi 14\text{mm} - \Phi 200\text{mm}$; effective length: 6000mm

Membrane density: 98-99.8%

Hardness: Hv1100-1400c

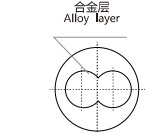
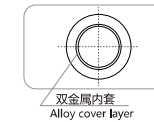
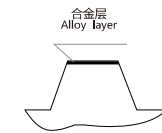
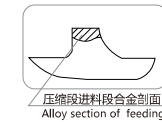
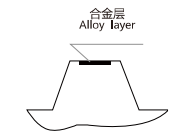
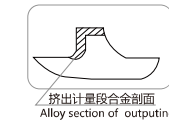
Adhesion strength: above 10000psi

Bimetal barrel: base metal 38CrMoAlA, 40Cr, 42CrMo

Bimetal screw: base metal 38CrMoAlA, 31CrMoV9 (foreign)

Bimetallic screw barrel

双合金螺杆机筒



双金级别:

A级: 含钨40%

B级: 含钨25%

C级: 含钨95%

合金硬度:

HRC 56~65°C

Double gold level:

Grade A: 40% tungsten

Grade B: 25% w

Grade C: 95% w

Alloy hardness:

HRC 56~65°C

技术指标 TECHNICAL TARGETS:

氮化层深度 Depth of nitration case: 0.5~0.8mm

氮化硬度 Hardness of nitration: 950~1020HV

氮化脆度 Fragility of nitration: Less than grade 1

表面粗糙度 Roughness of the surface: Ra 0.4um

螺杆直线度 Linearity on the screw: 0.015mm

双合金硬度 Hardness of double alloys: HRC55-62

双合金深度 Depth of double alloys: >2mm

Technical parameter:

The bimetallic barrel for single screw is a kind of barrel moulding 2-5mm-thick alloy coat on the barrel inner wall which has excellent corrosion resistance, abrasion resistance and high working temperature. And its useful service life is greatly improved contrast to the common nitrided barrel. Bimetal has more obvious advantages when processing special plastics to enhance the abrasion life, such as engineering plastics, fluorine plastics, PPO and etc.

The company uses special alloy powders being sprayed and welded on the screw's ridge, and used different alloys and welding methods for the screw of different functions.

For our bimetallic screw, we have adopted a new technology of surface hardening process by the whole screw surface instead of only hard facing the screw flights by PTA treatment.

For bimetallic barrel, we have raised its tungsten carbide content to 30% and 50% from the previous 10% of tungsten carbide and increased the processing length to 4000mm from the previous length of 3000mm

技术参数:

双金属机筒就是在机筒内壁浇铸一层2—5mm的耐磨耐腐蚀的、耐高温的合金, 其有效使用寿命比普通氮化机筒大大提高, 对于加工工程塑料、氟塑料、聚砜、PPO特殊类型的塑料等, 双金属的优越性尤为明显。

本公司生产的单螺杆双金属螺杆, 采用特殊合金粉末在螺杆螺旋部分喷焊合金, 可以针对不同功能的螺杆采用不同的合金和焊接方式。

双合金螺杆也从以往的PTA牙顶喷焊, 更新设备采用高压速 (HP/HVOF) 全面合金披覆的熔射技术。WPT1耐腐蚀型合金适用于尼龙、PVE、PC、PMMA等, WPT2耐磨耐高温型合金适用于尼龙玻纤、磁粉、铝镁粉、电木注塑等, WPT3兼有WPT1、WPT2两种特性, 耐磨耐腐蚀耐高温。

双合金熔胶机筒方面。从以往的合金含钨10%提升至含碳化钨30%及50%, 可加工长度亦从3000mm提升至4000mm。