

新莱福® | NEWLIFE

**金属注射成型件及高比重合金**  
**MIM PARTS & HIGH DENSITY ALLOY**



## 企业简介 About Us



广州新莱福新材料股份有限公司MIM项目成立于2003年，主要做钨合金MIM及PM的研发及生产。随着项目不断发展壮大，又增加了不锈钢等金属的生产线。目前项目拥有钨合金、不锈钢、铁基合金、铜合金、软磁材料、无磁钢等材料MIM和PM的加工平台及生产线，有气氛保护推板炉、真空炉等烧结设备20余台。我们聘请了国内专业院校数名教授为技术顾问，汇集了行业内众多优秀人才，致力于客户生产力的提升，为客户提供OEM和ODM的优质服务。

Guangzhou Newlife New Material Co., Ltd. MIM Project Team was established in 2003, mainly engaged in R&D and production of tungsten alloy MIM and PM. As the team has grown, the production line of stainless steel and other metals was added. Nowadays, Newlife has MIM and PM processing and production line of tungsten alloy, stainless steel, iron base alloy, copper alloy, soft magnetic material, non-magnetic steel and other materials, and more than 20 sintering equipments such as atmosphere protection push plate furnace and vacuum furnace. We have hired several professors from domestic professional colleges as our technical consultants, and gathered many excellent technicians. Newlife are committed to improving customer productivity and providing customers with OEM and ODM quality services.

什么是MIM?

MIM是金属注射成型（Metal Injection Molding）的简称，是一种将金属粉末与粘接剂通过混合与密炼以后注射于模具中的一种近净型成型技术。

What is MIM?

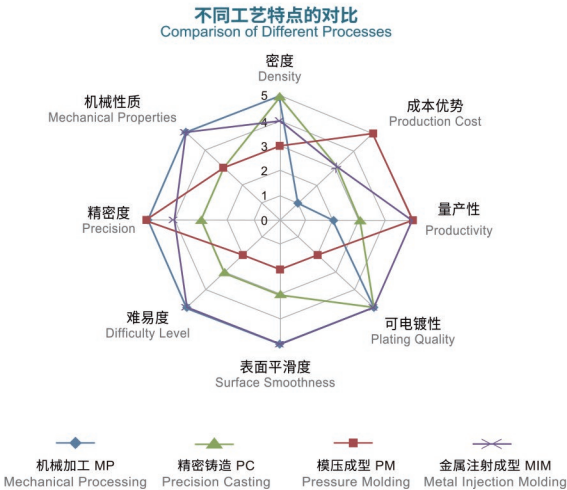
MIM is short for Metal Injection Molding. It is a near-net-shape molding technology, to inject the mixed and refined metal powder and binders into the mold.

MIM的特点

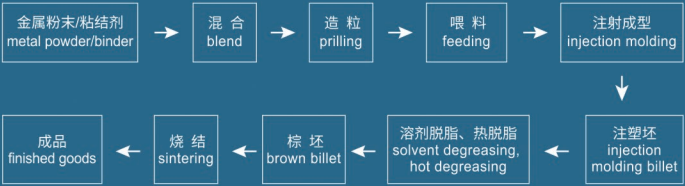
- 复杂性：能生产三维形状复杂的产品，和注射成型一样，形状设计没有限制
- 微型化、薄型化：能生产模数0.8的微型齿轮件以及壁厚小于0.5mm的产品
- 精密性：一次性的尺寸公差一般按±0.5%
- 产能：数量越大，MIM就越有优势
- 多种材料：不锈钢，铁基合金钢，钨合金，铜合金，可伐合金，软磁材料等

Features

- ◆ Complexity  
It can produce products with complex 3d shapes. Like injection molding, it is no limit to shape design.
- ◆ Miniaturization and Thinness  
It can produce micro gear parts with modulus 0.8 and products with wall thickness less than 0.5mm.
- ◆ Precision  
The one-time dimensional tolerance is generally ±0.5%.
- ◆ Capacity  
The bigger quantity, the more advantage MIM has.
- ◆ Various Materials  
Stainless steel, iron base alloy steel, tungsten alloy, copper alloy, kovar alloy, soft magnetic materials, etc.



🕒 MIM工艺流程图 Flow Chart



🕒 MIM的应用领域 Application



➤ 不锈钢产品 Stainless Steel Products

应用：消费电子，智能穿戴，医疗配件，电子烟配件，装饰件等。

Application: Consumer electronics, smart wear, medical accessories, e-cigarette accessories, decorative, etc.

材质 Material: SUS304, SUS316L, SUS420, SUS440C, 17-4PH

特性 Feature: 耐腐蚀性能好，强度高 Good corrosion resistance, high strength



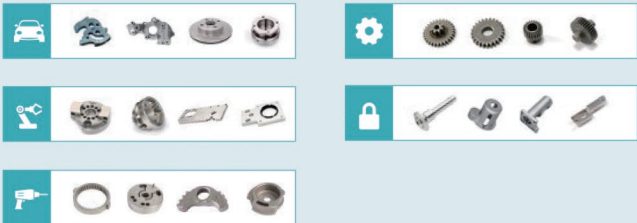
➤ 铁基合金钢产品 Iron Base Alloy Steel Products

应用：齿轮，工具配件，汽车配件，机械配件，锁配件等。

Application: Gear, tool parts, auto parts, mechanical parts, lock parts, etc.

材质 Material: Fe2Ni, Fe4Ni, Fe8Ni, FeC, FeCuC,  
粉末高速钢 Powdered High-Speed Steel

特性 Feature: 高强度，高硬度 High strength, high hardness



➤ 软磁合金产品 Soft Magnetic Alloy Products

应用：TWS耳机，电子元器件等。  
Application: TWS earphones, electronic components, etc.

材质 Material: FeSi3.5, FeSi6.0, FeCo, FeNi  
特性 Feature: 磁导率高，软磁特性好 High permeability, good soft magnetic properties



➤ 铜合金产品 Copper Alloy Products

应用：5G，电子元件，电极触头等。  
Application: 5G, electronic components, electrode contact head, etc.

材质：紫铜，青铜，黄铜，钨铜  
特性：热导率高，导电好，具有抑菌等特性  
Material: Copper, bronze, brass, tungsten and copper  
Feature: High thermal conductivity, good electrical conductivity, with bacteriostatic properties



➤ 无磁钢合金产品 Non-Magnetic Steel Alloy Products

应用：压缩机平衡块，无磁配重块，无磁结构件，汽轮发电机护环等。  
Application: Compressor balance block, non-magnetic counterweight, non-magnetic structural parts, turbine-generator protection ring, etc

材质 Material: 高锰钢，奥氏体不锈钢 High manganese steel, austenitic stainless steel  
密度 Density: 7.0-7.6g/cm³  
特性 Feature: 无磁性，强度高 Non magnetic, high strength



# 高比重合金 HIGH DENSITY ALLOY

## 产品介绍 Introduction

高比重合金是以W为基（W的质量分数为80%~97%），并添加有Ni, Fe, Mn, Co, Cu, Mo, Cr 等元素的合金。

High density alloy is based on W (W's mass fraction is 80% ~97%), and added with Ni, Fe, Mn, Co, Cu, Mo, Cr and other elements alloy.

## 产品特点 Feature



**高密度**  
high density



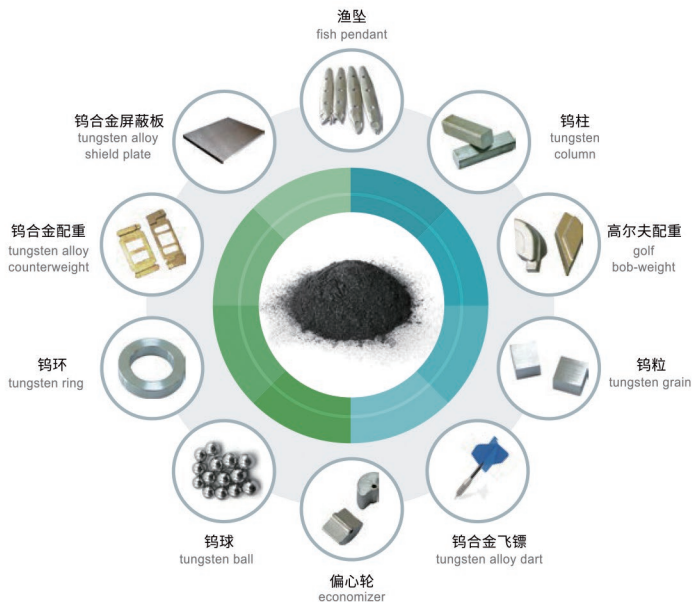
**高强度**  
high strength



**耐高温**  
high temperature  
resistance



**耐腐蚀**  
corrosion  
resistance



钨合金配重 Tungsten Alloy Counterweight

应用：振动马达，手机，电动牙刷，按摩器，高尔夫，渔具，汽车等。

Application: vibrating motor, mobile phone, electric toothbrush, massager, golf, fishing gear, vehicle, etc.

材质 Material: W-Ni-Cu, W-Ni-Fe

密度 Density: 13.5-18.2g/cm<sup>3</sup>

特性 Feature: 密度高，耐腐蚀性能好  
high density, good corrosion resistance



钨合金球 Tungsten Alloy Ball

应用：配重，子弹，穿甲弹，榴弹，航弹，手雷，预制破片等。

Application: Counterweight, bullets, armor-piercing shells, grenades, aircraft shells, grenades, prefabricated fragments, etc.

材质 Material: W-Ni-Fe, W-Ni-Cu

直径 Diameter: 0.5-20.0mm

密度 Density: 13.5-18.2g/cm<sup>3</sup>

硬度 Hardness: HRC>23

抗拉强度 Tensile Strength: >900MPa

延伸率 Elongation: >10%



钨合金环 Tungsten Alloy Ring

应用：钨合金耳环，钨合金项链，钨合金戒指，工业配重，钨合金预制破片，如大口径榴弹，航弹，手榴弹，地雷等产品中。

Application: Tungsten alloy earrings, tungsten alloy necklaces, tungsten alloy rings, industrial counterweights, tungsten alloy prefabricated fragments, such as large caliber grenades, aircraft bombs, grenades, mines and etc.

材质 Material: W-Ni-Fe  
直径 Diameter: 0.5-20.0mm  
密度 Density: 13.5-18.2g/cm<sup>3</sup>  
硬度 Hardness: HRC>22  
抗拉强度 Tensile Strength: >900MPa  
延伸率 Ductility: >10%

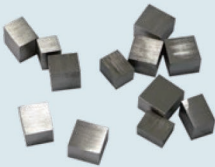


钨合金粒 Tungsten Alloy Grain

应用：体育用品配重，飞机配重，坦克配重，穿甲弹弹芯等。

Application: Sports goods counterweight, aircraft counterweight, tank counterweight, armour-piercing projectile core, etc.

材质 Material: W-Ni-Fe  
直径 Diameter: 1.0-20.0mm  
密度 Density: 13.5-18.2g/cm<sup>3</sup>  
硬度 Hardness: HRC>23  
抗拉强度 Tensile Strength: >900MPa  
延伸率 Ductility: >10%



▶ 主要设备及仪器 Main Equipments & Instruments



注射机  
Injection Machine



催化脱脂炉  
Catalytic Degreasing Furnace



真空炉  
Vacuum Furnace



气氛保护推板烧结炉  
Atmosphere Protected Push Plate Sintering Furnace



连续推板烧结炉  
Continuous Push Plate Sintering Furnace



扫描电子显微镜  
Scanning Electron Microscope (SEM)



X射线衍射仪  
X-ray Diffractometer (XRD)



X射线荧光光谱仪  
X Ray Fluorescence Spectrometer (XRF)



振动样品磁强计  
Vibrating Sample Magnetometer (VSM)

➤ 质量保证体系 Quality Control System

通过了IATF16949、ISO9001:2015、ISO14001:2004  
Certified with IATF16949, ISO9001:2015, ISO14001:2004



IATF16949:2016管理体系认证  
IATF16949:2016 Quality  
Management System



ISO9001:2015质量体系认证  
ISO9001:2015 Quality  
System Certification



ISO14001:2004环境管理认证  
ISO14001:2004 Environmental  
Management Certification



荣誉及认证  
Honor & Certificates



专利证书  
National Patents



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