

## Die Casting Solutions Created from Three-Part Technology

( **Materials** + Processing + **Heat / Surface** Treatment )

### Exceptional Core Pins

Conventional Pins



Shaping Pins



Cold Work Pins

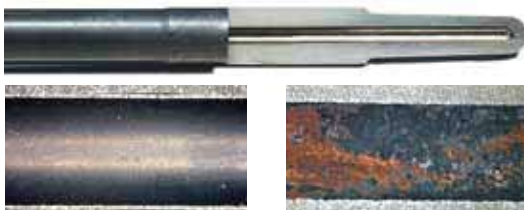


Hollow-Core Pins



Exceptional deep hole processing, fine hole processing, and hole processing precision cold work pins

SG Pin



Ultra-thin SUS304 pipe insertion cold work pin  
SG pins are less susceptible to rusting after use than conventional cold work pins.

Cooling Junction



These pins show the effectiveness of rust countermeasures and cold strengthening

## Wide Range of Machine Products

Plunger Sleeve



Down gate sleeve



Flow separator



Pin Bushings & Sleeves



SUS Bushing

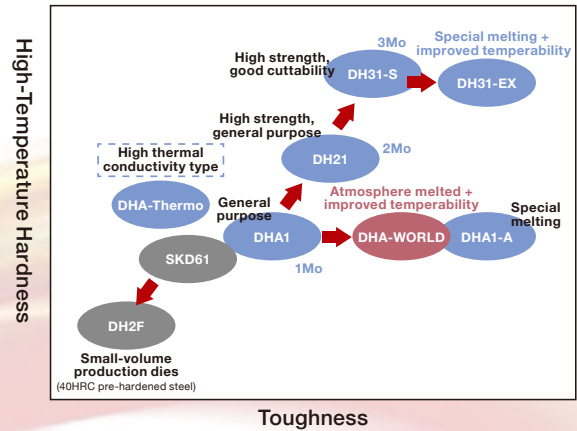


SUS bushings are ideal for rust countermeasures and water leak countermeasures on die cold work holes.

## Extensive Die Material Lineup

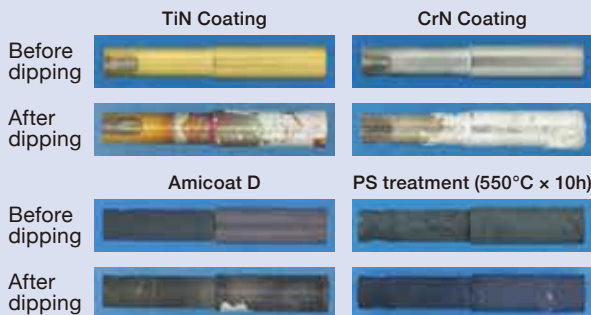
Category	Steel Type	JIS	Features
Pentavalent chromium atmosphere melted type	DHA1	SKD61	General purpose hot work die steel
	DHA-WORLD	—	General purpose hot work die steel with high ductility and hardening properties
	DH21	—	High-temperature strengthened modified steel with high ductility properties
	DH2F	SKD61 modified	Free-cutting pre-hardened steel (HRC40)
Pentavalent chromium special melted type	DHA1-A	SKD61	DHA1 special melting material
	DH31-S	—	High-temperature strengthened modified steel with high ductility properties
	DH31-EX	—	Improved steel with high ductility properties, high-temperature strengthening, and hardening properties
High thermal conductivity type	DHA-Thermo	—	High thermal conductivity material Thermal conductivity: DHA-Thermo: 26 W/m-K; SKD61: 28 W/m-k
Matrix high-speed	DRM1	—	High hardness steel with good cutting properties

Positioning of Die Casting Steels



## Distinctive Surface Treatments

### Seize Resistance



Aluminum alloy: ADC12, melting point: 750°C, dipping time: 30 s  
Samples were raised and after cooling, adhered aluminum alloy waste was removed.

Dissolution Loss Resistance

