# Alloy Steel Powder for High Strength Sintered Parts: JIP 21SX

Realizing high strength/high hardness without post sintering heat treatment

## JFE Steel Corporation

http://www.jfe-steel.co.jp/en/

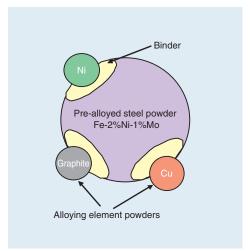


#### Alloyed Steel Powder for High Strength Sintered Parts: JIP21SX

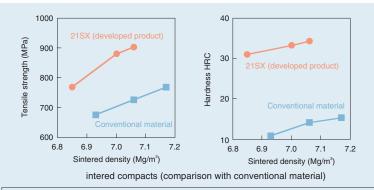
As an alloyed steel powder which satisfies both high hardenability and high density (high compressibility, high sinterability), JIP 21SX realizes the properties of high strength/high hardness with only cooling after sintering. Because heat treatment processes such as carburization can be omitted, JIP21SX contributes to reduced sintered part manufacturing costs.

### Features

- 1 High strength and high hardness equal to heat-treated materials with only cooling after sintering.
- 2 High performance with general-purpose sintering furnaces.
  - · High temperature furnace and special quenching equipment are not necessary.
  - $\cdot \ Sintering \ is \ possible \ with \ endothermic \ gas \ (propane \ converted \ gas \ < N_2-32\%H_2-24\%CO-0.3\%CO_2>).$
- 3 Flexibility in alloy design to meet specific requirements.



Schematic diagram of JIP 21SX



Mix composition: 21SX (developed product): (Fe-2%Ni-1%Mo pre-alloy) + 3%Ni + 1%Cu + 0.6%C
Conventional material: (Fe-4%Ni-1.5%Cu-0.5%Mo partially-alloyed steel powder) + 0.6%C
Compaction: 588MPa
Sintering: 1130°C x 20min, endothermic gas, cooling rate: 30°C/min

# Applicable Automobile Parts

