

KAWASAKI STEEL TECHNICAL REPORT
No.43 (October 2000)

Am 0

Strengthening Mechanism of Cr Aligned Steel Powder

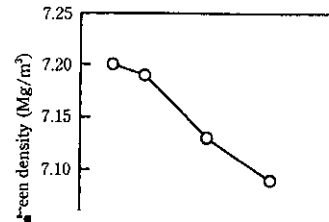
for High Strength Sintered Parts*

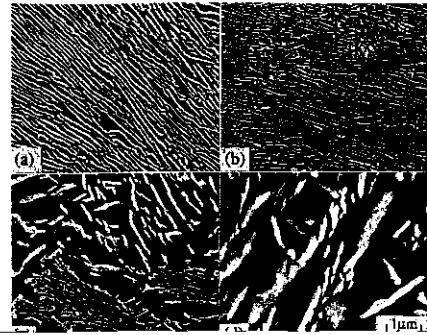
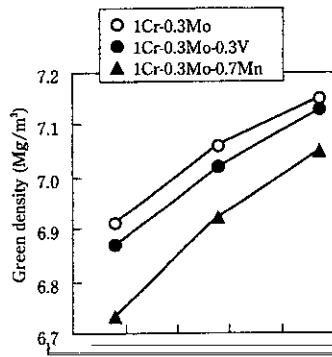
Synopsis:

A prealloyed 1Cr-0.3Mo-0.3V (mass%) steel powder,

Table 1 Chemical compositions of powders used

| | (mass%) | | | | | |
|-------|---------|------|------|---|----|----|
| | Cr | Mn | Mo | V | Ni | Cu |
| 0.5Cr | 0.50 | 0.05 | 0.01 | — | — | — |
| 1Cr | 1.09 | 0.02 | 0.01 | — | — | — |
| 2Cr | 2.05 | 0.04 | 0.01 | — | — | — |
| 3Cr | 3.18 | 0.05 | 0.01 | — | — | — |





Compacting pressure (MPa)

Photo 1 Microstructures of 1Cr-0.3Mo sintered

1 100

- 1Cr-0.3Mo-0.3V
- 1Cr-0.3Mo
- 4Ni-1.5Cu-0.5Mo

0.1

- 1Cr-0.3Mo-0.3V
- 1Cr-0.3Mo
- ▲ 1Cr-0.3Mo-0.7Mn

Pearlite lamellar spacing, λ (μm)

