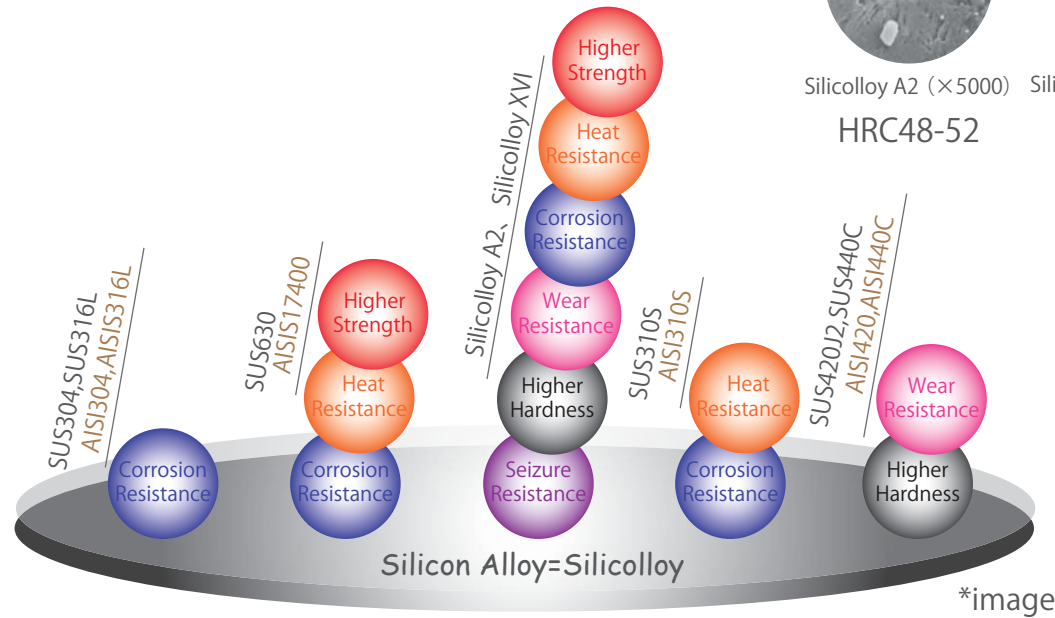
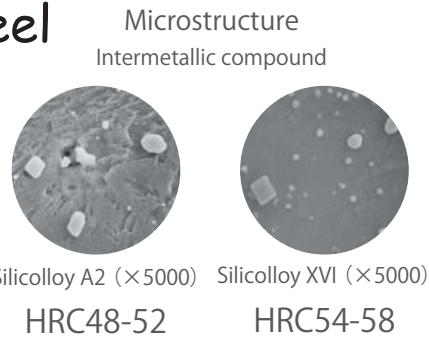


Silicolloy®

Precipitation Hardened Stainless Steel



Strength & Hardness of steel was used to be realized by the feature of "carbon", but "silicon" affects in case of Silicolloy. For the reason above, silicolloy become dream new materials with multiple features which couldn't bring about from old idea.

Hardness vs Corrosion Resistance

Silicolloy A2 and Silicolloy XVI are superior in the hardness and corrosion-resistant balance.

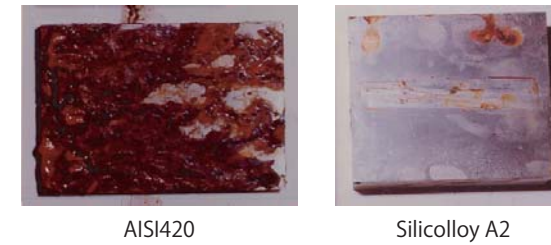


Figure 1 - After 500 hours salt spray test exposure.

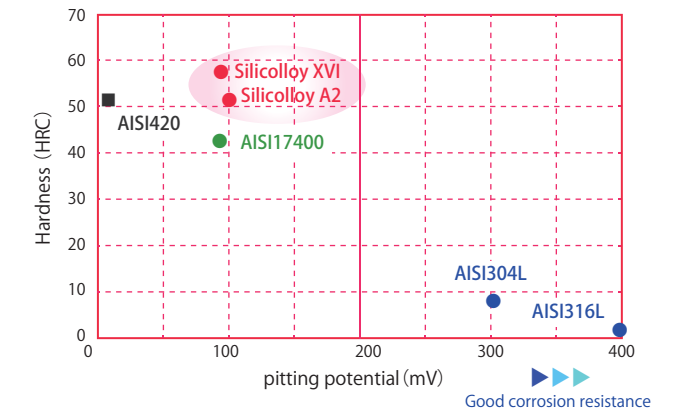


Figure 2 - Relationship between hardness and pitting potential.

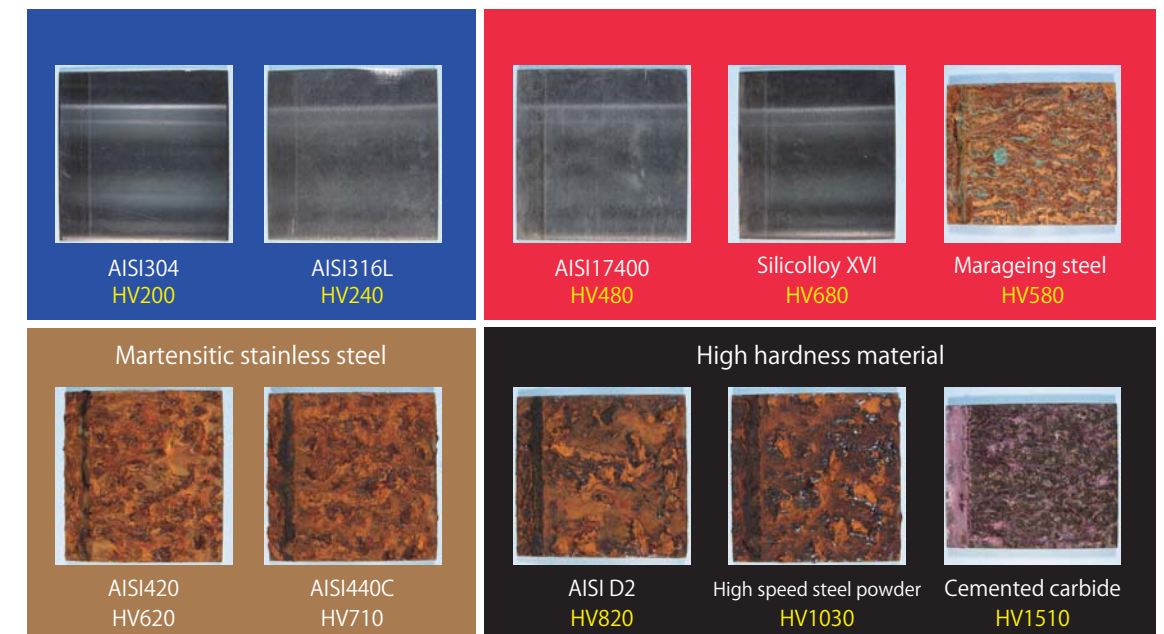


Figure 3 - After 240 hours salt spray test exposure.

Advantage of Silicolloy

1. Due to the multiple features, Silicolloy can be used in adverse environment which regular stainless steel can't adapt to.
2. 'Longer-Lasting' can effect reduction in total cost.
3. There are few dimensions changes, because heat-treatment temperature is low.

Characteristics of Silicolloy

Silicolloy A2 and Silicolloy XVI are precipitation hardened stainless steels with high silicon content, and its higher strength, hardness and wear resistance are superior to AISI17400. Though its corrosion resistance is inferior to austenitic steels, it's superior to martensitic and ferritic steels and totally greatly balanced steel. Precipitation hardened steels are hardened by age hardening after solution treatment, so rarely have problems both in processing and distortion after heat treatment like quenching mold. Especially, Silicolloy XVI achieved the best hardness in the world concerning to the precipitation hardening.

Wear resistance

Pin-on-Disk grinding test

Testing condition
 Lubrication condition: Dry Disc rotation speed: 400rpm
 Temperature: room temperature Sliding velocity: 12.6m/min
 Sliding time: 10min Sliding distance: 126m

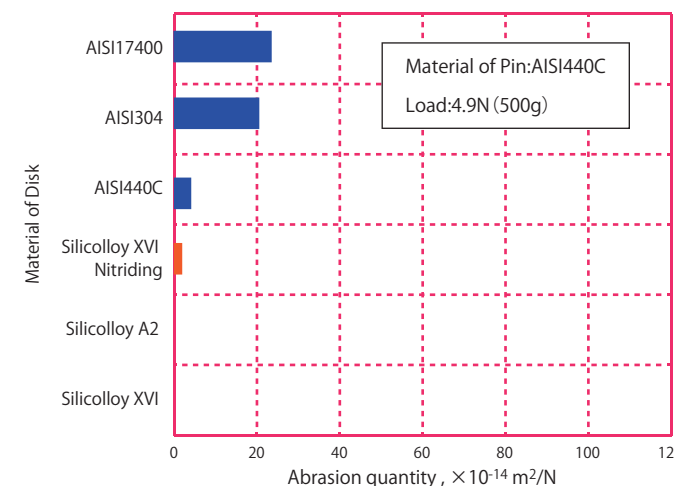


Figure 4 - Pin-on-Disk grinding test1

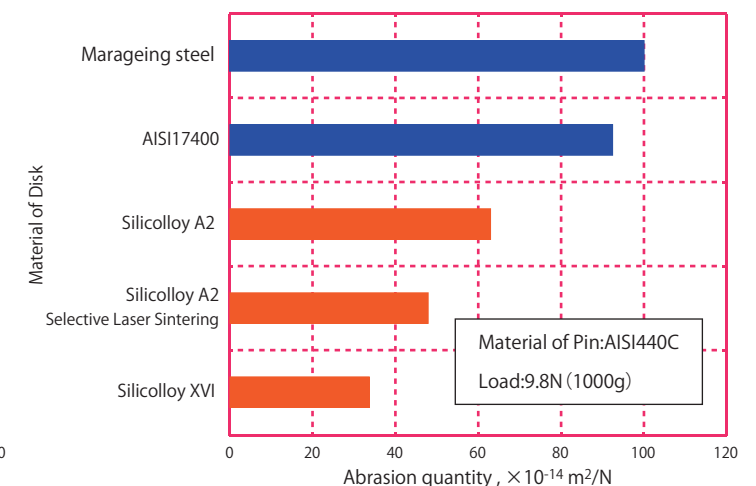


Figure 5 - Pin-on-Disk grinding test2