

Alloys for additively manufactured parts in hydrogen facilities.

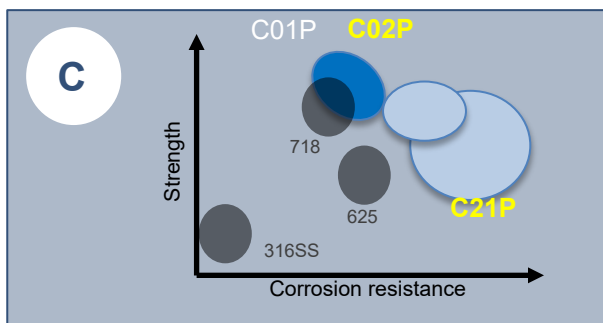
Super-corrosion resistant / High-strength additively manufactured alloys selected for hydrogen-related harsh environments.



Outline

ADMUSTER® are materials with a wide spectrum of properties designed for additive-manufacturing

Corrosion resistant



Heat Resistant

H

H718P H44P
H05P H713P
H929P

Wear resistant

W

YAG™350AM
YAG™285AM

Refractory

R

R01P
R02P

Lightweight

L

L61P

Feature

ADMUSTER® C21P

- Ni-Cr-Mo type alloy with excellent corrosion resistance in oxidizing and non-oxidizing environments with higher strength.
- Used for chemical/semiconductor/oil&gas plants components exposed to chemically-harsh environment

ADMUSTER® C02P

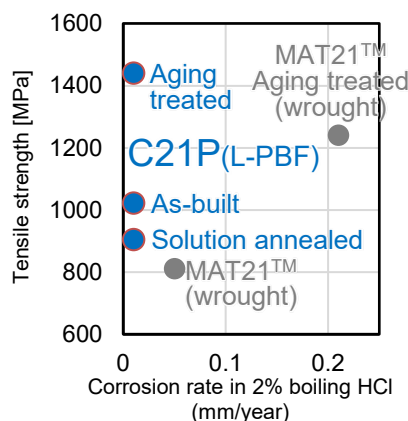
- CoCrFeNiTiMoTa high-strength multi-principal element alloy with less hydrogen embrittlement susceptibility
- Developed for facilities operating in hydrogen containing environment for carbon-neutral societies.

Immersion loss rate in boiling acid

	HCl (10%)	H ₂ SO ₄ (40%)
C21P (L-PBF)	3.1	0.3
MA22 (wrought)	9.6	1.9
MA276 (wrought)	4.8	1.7
316L SS (wrought)	>300	>300

L-PBF: Laser powder bed fusion

Properties of heat-treated products



Hydrogen embrittlement susceptibility test

