

Develop the material for micro screw which cannot carry out delayed fracture easily. (TDL3)



「Surface hardness is high. Internal toughness is excellent. And the delayed fracture characteristics is excellent.」

Chemical analysis

							(Wt %)
C	Si	Mn	P	S	Cr	Al	Special element
0.05	0.08	1.44	0.008	0.008	0.07	0.033	Addition

- The amount of carbon is reduced. Internal toughness is improved.
- Hardening by the addition of 「Mn」.
- Impurities element is reduced. And occlusion of hydrogen is prevented.
- Prevented from delayed fracture by the addition of fine grain element.

Product size and feature

- Bolt size : Below M3
- Surface hardening and internal toughening by the special ingredient and heat treatment.
- Realization of fine grain size by the special element, manufacturing process, and heat treatment.

(Realization of preventable micro screw from delayed fracture.)

Delayed fracture

Size	Test result	Test condition
M3	No break (n = 10)	1: Load it by bolting torque / 80%. 2: Leave it - 18 / 24hr. 3: Bind it tight and confirm existence of the head- breakage.