

NITTO SEIKO'S SPECIAL FASTENER FOR MAGNESIUM ALLOY



MAG-TITE™ CP PAT. P

MAG-TITE CP outline

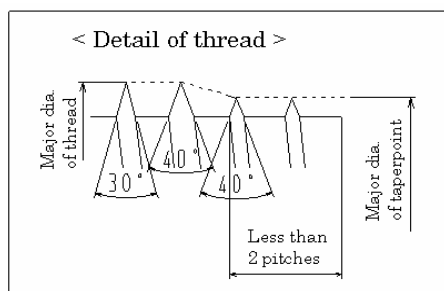
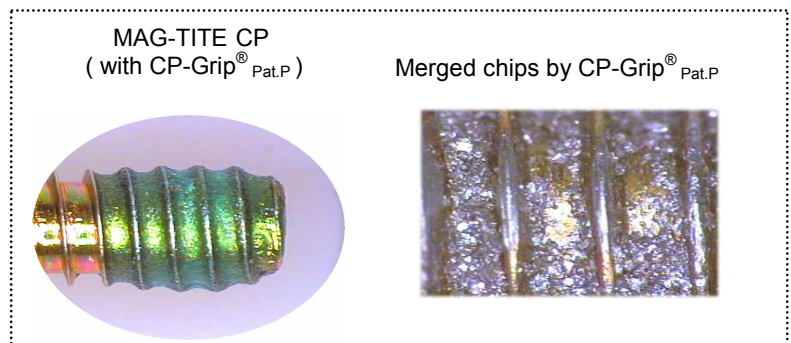
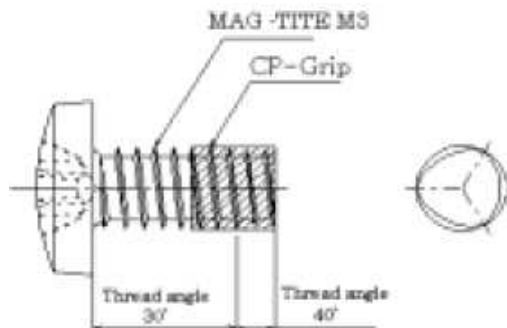
It is a trend of current industrial to use magnesium alloy because it realizes market's demand, weight saving, crashworthy, heat releasing, recycling efficiency etc.

But this universal material has a problem that it generates chips when it is fastened by self-tapping screws.

Nitto Seiko's MAG-TITE CP has been developed to solve such problem. MAG-TITE CP's special thread decreases generating of chips and it's special coating merges chips to prevent falling and flying off of chips.

MAG-TITE CP's special features

1. Low and stable installation torque, and high removal torque.
2. Prevents falling of chips.
3. Coating from isolative material hardly causes short out of circuit even if merged chips falls on circuit board.
4. Can be used more than once.



- The first 2 ~3 threads from the point with 40° thread angle are followed by threads with 30° of thread angle.
- The pitch is wider than Machine screw.
- The CP-Grip is an environment-friendly coating which is made from aqueous raw material.
- The spread area of CP-Grip is approximate 60 % from point of thread.

Application

***Electronics devices like,**

Lap top computers, Digital still camera, Projector,
Mobile communication appliance, etc

If you are interested in to use our MAG-TITE CP for your concrete application, please send actual work pieces to our fastener laboratory. We can provide you more detailed data for your best fastening by examination.

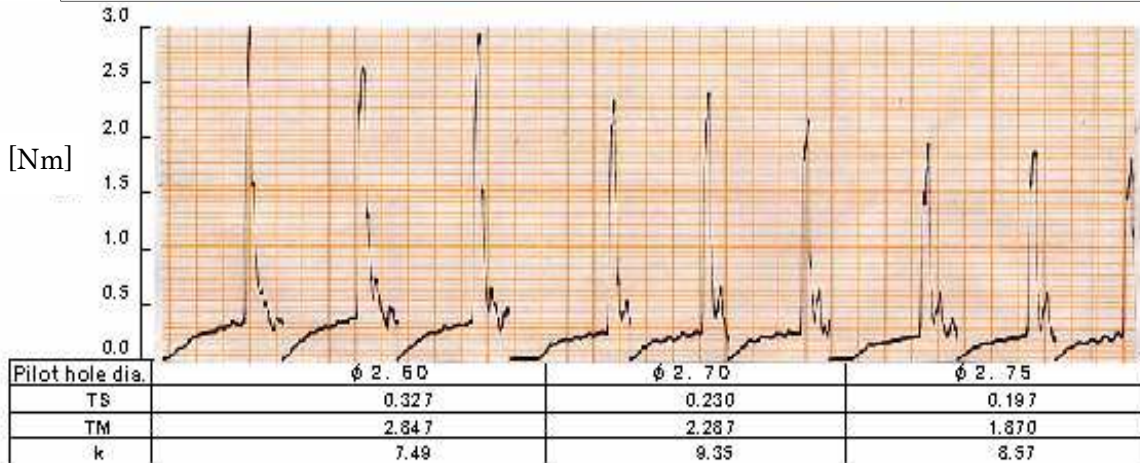
Performance of MAG-TITE CP

1. Torque curve of MAG-TITE CP



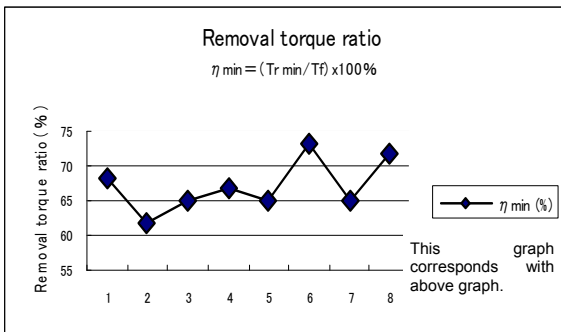
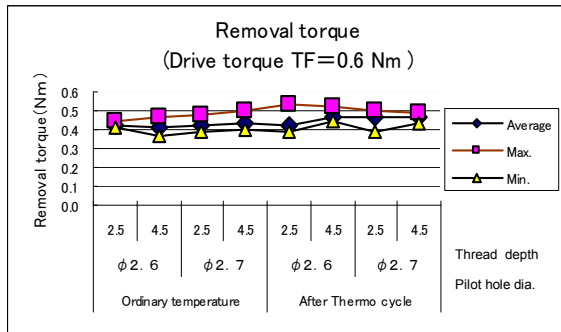
○Fastening condition

Screw size : MAG-TITE CP M3 Work piece : Magnesium alloy AZ91
 Thread engagement depth : 4.5mm Liner : SPCC Drive speed : 600 rpm Feed speed : 25mm / sec



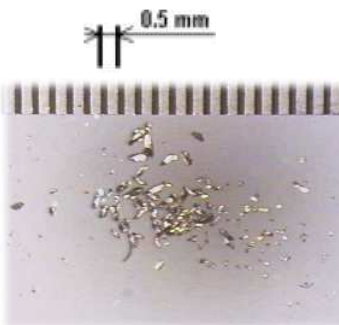
(NOTE) TS: Installation torque TM: Stripping torque K: Drive-to-strip torque ratio (=TM min. / TS max.)

2. Removal torque



(NOTE) Condition of thermo cycle test: Tested after exposure (-23°C X1h + 65°C X1h + ordinary temperature) X100 cycles

3. Absorption effect



○Fastening condition

Work piece : Magnesium alloy AZ91
 Thread engagement depth : 5.0mm
 Pilot hole dia. : φ2.6 (Boss hole)

1.Screw : MAG-TITE M3
 (Without CP-Grip)
 ● We fasten MAG-TITE (without CP-Grip) to the above condition of hole. When we remove the screw, we found some chips as the left picture.



2. Screw : MAG-TITECP M3
 ● When we fasten MAG-TITE CP (with CP-Grip) in the same condition as above,
We could not find any chips.

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