

Development of Motiontite

No.5

In the past one to two years, we have had more and more opportunities to receive inquiries from major companies about loosening or breakage of a screw. Obviously, the loosening or the breakage necessarily has its causes. Most of the causes are related to variation in the axial force, but there are also cases where the causes cannot be specified easily. The latter cases include, for example, a case where the cause is a partial contact of the screw, and a case where the cause is low accuracy of a tapped hole on the internal thread side.

Motiontite (trademark registered) having a structure, in which the threads are tightened while deforming elastically, exerts a great effect upon the loosening or the breakage caused by the variation in the axial force or the partial contact. A load is distributed among all the threads in Motiontite as contrasted to ordinary screws, in which a load concentrates on three tightened threads. Accordingly, Motiontite not only provides a stable axial force but also exerts an overwhelming anti-loosening power because of an elastic repulsive force from the threads, among which the load is distributed. If you have any troubles related to the loosening or the breakage of the screw, please try Motiontite.

We are now developing a thread shape largely improving fatigue strength. A shape capable of achieving approximately 1.5 times as high fatigue strength as the ordinary screws is nearly completed. Already marketed Motiontite provides approximately 1.2 times as high fatigue strength as the ordinary screws. By obtaining higher fatigue strength, a bolt can be downsized, whereby realizing weight reduction and significant cost reduction. Whereas the present Motiontite brings the external thread tip first into contact with the internal thread, newly developed one has a shape causing the external thread and the internal thread contact each other in parallel as in the ordinary screws.

Work for narrowing down the shape out of infinite possible shapes is a daunting task, but it is also accompanied by a great joy. The spirit of manufacturing exists therein.

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