



Renom

Constructora Española de Maquinaria, S.A.

C.I.F. A-08-047.300
Ctra de Ribes, 50 – 08591 AIGUAFREDA (Barcelona)
Apdo. 1255 – Tef +34 93 844 00 00 y +34 93 844 22 44 – Fax: +34 93 844 21 12
<http://www.cemsa-renom.com> e-mail: info@cemsa-renom.com

WHY USING A TORQUE LIMITER

Problems related to overloads or clogging due to mobile elements blocking while running, often happen in several industrial fields. Such blockings can be total or partial and can appear in driving, propagation or torque conversion equipment. The overload, depending on its origin, length and value, may result in the destruction of the elements which are more fatigued or short sized, causing in this way expensive idling times.

Still nowadays some machinery manufacturers oversize the elements of their machines in order to make them resistant to predictable overloads. This is an incomplete solution, since it is only effective for partial clogging or specific overloads, but not for total blockings which is very common for several types of machine. In addition, this solution has not sense from an economical point of view, for it increases raw material costs, manufacturing times and energy consumption. All these reasons lead to light solutions but rightly protected.

Thermal electrical devices constitute an excellent protection measure for machines where moving masses have a low inertia module and it is the static torque that does the work. However there is a great number of machines where the kinetic energy of moving masses can cause important damages when an abrupt partial or total blocking happens. In these cases, even if the thermal protector detected that overload and disconnected the engine might have no effectiveness. The energy stored in the masses makes the torque reach dangerous value while blocking, and so requiring an additional protection.

In other occasions it is necessary to divide the total running power among several driving equipment (like used in some machinery treating arids) , so that neither of them can act on the others, that is, no more load can fall over neither of them.

The most suitable solution for the stated situations and many similar ones such as safety switches or multiple power takeoffs for different runnings with a single engine, is using the “LSC” series torque limiter and its variants. Some of these variants, for instance, the torque limiter with the flexible coupling, provides a solution with total protection, as well as reducing the loads due to displacements in the shafts.