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CALOR PRESS

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*Stampaggio a caldo ottone,rame,argento - fibbie e minuterie metalliche,medaglie,
particolari meccanici di precisione - costruzione stampi - attrezzatura interna*

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Technical report

The items we supply are obtained with “plastic hot deformation of the material “ or hot pressing. This kind of machining in fact gives to the finished product the best guarantees of compactness and resistance to mechanical stress, keeping the material fiber as well as the quality of the product unaltered.

About this here below you can find an article taken from a specialized book explaining all the advantages of the hot pressing and the grain of the fibers of the die-cast material.



WHY PRESSED?

The hot pressing, or forging, it's an hot plastic transformation of a forgeable material, leaded using fitted machines and moulds: an hammer (shock action), punch press and forging press (pressing action).

The raw material (billet or bar) is obtained throw different rolling actions which decreases the pig section.

This machining removes the classical defects of the fusion process, refines the crystal structure and gives defined qualities: removes all remaining porosities, orients the crystal inclusions and segregations in the work direction (fiber orientation).

The orientation of the structure gives to the material and to the products obtained from this, an high fatigue strength, high mechanical characteristics, structural uniformity and dimensional constancy.

In the punching process, in this case, the grain of material can be oriented to the greatest work stress of the piece.

Furthermore, choosing properly the kind of material, it's possible to obtain pieces with even higher temperature strength, corrosion strength, abrasion resistance characteristics.

Then, if the item is subjected to a heat treatment (normalization, drawing of temper, hardening, cementation.....) it's possible to widen the characteristics of the punched piece.

Having a precise grain, a refined crystal structure and a heat treatment, enables us to consider positively the weight-stress ratio: in a punched piece, in fact, less quantity of material is used, with the same performance.

The pressed piece, then, gives higher quality and reliability guarantees; in many situations we can assure that there are not substantial alternatives and, in the same time, economically convenient.



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Drawing showing how the pressed brass maintains unchanged the grains of the material.

