DieCast ZA-27 Beats Steel and Aluminum

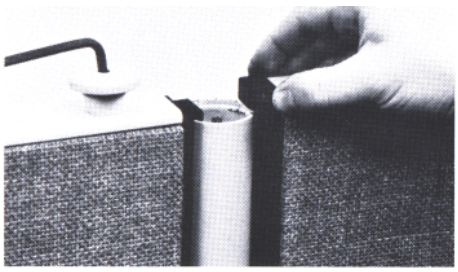
GF Business Equipment, Youngstown, Ohio, is a progressive company that specializes in office furniture equipment, and they do their darndest to make the best possible products at the lowest costs-a mighty sensible attitude in these competitive times.

Take their Top Post Clips, for example. A small part, but a very important one. It holds together and supports panels in GF's "Open-Plan System." The clip must be strong, dependable, and guaranteed trouble-free.

GF went to a lot of time and trouble to find the best material for their clips. First, they tried investment castings in 1020 steel. Tests proved properties were fine, but, frankly, the parts were far too expensive. Next, they invested in die cast tooling, and tried various aluminum alloys. Although costs were low, impact tests showed that performance of the aluminum parts was marginal at best-just not good enough.

The best cost/performance profile by far came with Eastern Alloys, Inc.'s new ZA-27 zinc alloy. Using the same dies made for the aluminum parts, die castings in ZA-27 worked great. The ZA-27 parts were stronger and there was a dramatic improvement in impact properties. Cost? Marginally more than aluminum, but over 50% less than investment cast steel.

GF Business Equipment's "Open-Plan System" of panels and office components now incorporate die cast ZA-27 Top Post Clips.



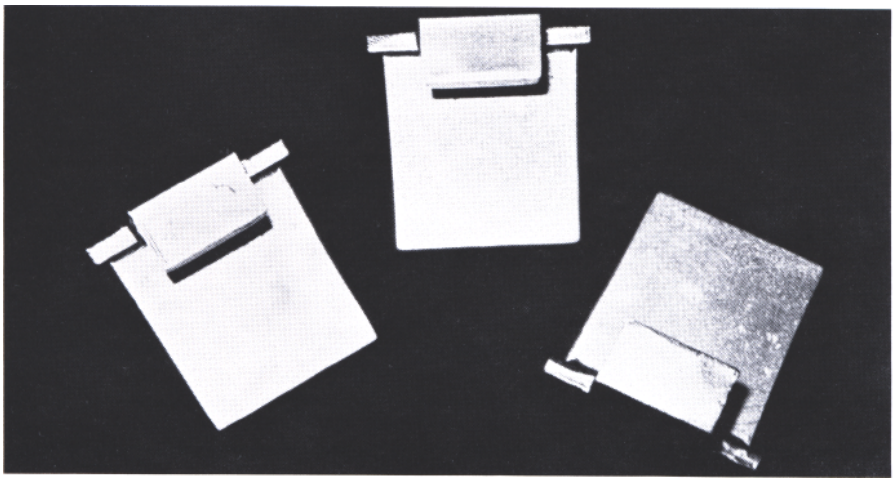
Top Post Clips shown above hold together and support panels in GF's "Open-Plan System".

Phil Williams, GF's Manager of Engineering Services, explains, "We developed a special impact test consisting of a 15-inch steel bar movement arm which was repeatedly dropped on the front edge of our experimental clips. We calculated the test would simulate some of our more abusive service conditions. Steel worked best, but not much better than ZA-27. All the aluminums were rated very low, and didn't even come close to the performance of ZA-27. ZA-27 was our answer in terms of both cost and high performance." The result is that GF has been satisfactorily producing their Top Post Clips in ZA-27 for a year now, and they're confidently evaluating other applications.

What about die casting? Although ZA-27 was developed as a high strength sand casting material, there was no difficulty die casting the alloy. However, ZA-27 has to be die cast like aluminum, in a cold chamber die-casting machine. Conneaut Die Casting, Conneaut, Ohio, makes the clips for GF, and Frank Ryan of Conneaut comments enthusiastically, "Our experience with ZA-27 has been very good. Casting rates, casting fluidity, and finish are excellent-better than aluminum. And, we expect die life to be longer because of lower casting temperatures (250°-350°F lower than aluminum). Melting in a silicon carbide crucible is the only change we had to make and that was no problem!"

ZA-27 is new to die casting, but not for long. (What other low-cost die casting alloy gives you 60,000 psi strength with high hardness (120 BHN)?) Eastern Alloys sees exciting new markets opening up for the die caster using ZA-27: better wear resistant pulleys, timing gears, bushings and lock parts and a substitute for iron, brass or hard anodized aluminum hardware. Wherever strength and high hardness for good wear resistance are needed, die casting ZA-27 may be the answer. But, more importantly ZA-27 is a marketing opportunity for the die caster to generate profitable new business unobtainable with conventional alloys.

Eastern Alloys is ready to help you with your ZA-27 considerations. In fact, we'll explain our entire family of ZA zinc alloys and how their properties can benefit your products. Just call or write Derek Cocks at Eastern Alloys, Inc.



Die Cast ZA-27 Top Post Clips proved strong, impact resistant and trouble-free.

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