

ACPA SAFETY BULLETIN

**DOUBLE S-BEND ELBOW OR "RAMS HORN"
CAN BE DEADLY...**

Contractors may sometimes require or request the use a double-ended discharge hose and a double "S" shaped steel elbow when pouring concrete.



Figure 1

The intended purpose of this device is to prevent concrete from free-falling out of the boom end hose and to create a slower/steadier flow. The use of this device is sometimes requested because it has been shown that concrete loses some of its larger entrained air bubbles upon sudden impact, which could decrease the overall air content.

However, this device increases the potential for serious personal injury. Should the hose move laterally, or whip violently from the sudden release of trapped air, the double "S" elbow will have the mass and momentum to cause serious and even deadly injury to any person in its path. It is because of this potential danger that **the ACPA does NOT recommend the use of either these devices or a double-ended discharge hose.**

There are several alternative methods available that minimize the loss of entrained air in the concrete mix while pumping. These methods include (but are not limited to): boom configurations that minimize vertical drops (ie positioning the tip section horizontally), the use of a reducing end hose, the use of a steel reducer between the boom tip and the end hose, or using a double S elbow or Rams Horn at the end of the boom to which a single-ended discharge hose can be attached. These alternate methods are also effective, yet they do not pose a hazard to the workers.