

# SAFETY SHOOTER



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## Pump Safety Tips: Protecting Pump Operators and Ready Mix Truck Drivers

Here is an important safety tip: Reducers and pumping lines should be directed away from the operator, whenever pumping conditions allow. This means

reverse the 90-degree reducers and run the pumping system away from the pump operator and the ready-mix truck driver (refer to Fig. 1).

What happens on one-way streets, such as in San Francisco, where you cannot change the way the system can be run? We also have found out that running the shotcrete line system per Fig. 1 can be difficult when pumping shotcrete material that may tend to plug easily. The operator always seems to be going to the other side of the pump to unplug the lines, making it hard to access the ready-mix truck at the back of the pump.

After some serious brainstorming, we came up with a protective solution that would contain the concrete if a hose or reducer broke. We wanted to find something that could be bought almost anywhere and was priced right. Some type of rubber mat seemed to make sense. Our idea was to use a rubber mat from the bed of a pickup truck. To test this idea, we dumped all the tools out of a foreman's truck and used that mat. We cut it in half and used the special shotcrete attachment device (tie wire) and tied it off. It worked great. We now buy mats for approximately \$75, install holes, and attach bungee cords (refer to Fig. 2).

### Pump Clean Up

Protecting reducers and couplings is not only a safety concern but an environmental issue as well. We pump a lot of shotcrete

and concrete off city streets in San Francisco and Oakland, CA. These cities, like many other cities and towns, have strict laws against disposal of concrete, particularly washing out pumps and mixer chutes onto the streets.

I know this first hand. About 7 years ago I was shotcreting an eight-story-high building in Oakland. A hose plugged and soon the entire system was plugged. It was a very hot day and we were about to lose the system. We quickly took all the reducers off to clean them. In the middle of this mess going on in the street, an Oakland police officer came along. She asked who owned the concrete pump. After a little discussion, I confessed that I did. She then gave me a ticket for dumping concrete in the street. I told her it was a problem with the pump, that the system was plugged, and we were in danger of losing the whole system. The hot weather was only making matters worse, I told the officer. She said, "Tell it to the judge," and gave me a ticket.

Knowing that judges are usually reasonable people, I went to court to plead my case. I did such a good job explaining the problem that the judge fined me \$2500 for dumping concrete in the street. I paid the fine and learned the hard way. No concrete can be dumped on the street.

We now use a plastic plaster-mixing container to contain concrete as shown in Fig. 3. These containers can be purchased at your local building supply store and cost a lot less than \$2500.

So take heed and protect reducers and lines for both safety and environmental reasons. A few moments of forethought and a few dollars can make all the difference in taking a dangerous plugging situation and reducing it to a manageable inconvenience.



Fig. 1



Fig. 2



Fig. 3