

SELF LOADING WATER TANKER WITH SPRAY SYSTEM

Garfield County, Colorado

Contact:

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Problem Statement:

The tanker we used started out as a hot oil tanker that was purchased in Denver. After we received it the insulation was removed from around the tank. It was then plumbed for a gravity flow system with a 6-inch outlet and a splash pan installed to spread water. We needed a water tanker of that capacity to haul water a long distance for our Mag Chloride program. We also purchased a self-priming trailer mounted pump with a 4-inch outlet and inlet to load with. Loading time was around 30 to 40 minutes under ideal conditions. The tanker was used one season with the gravity flow system and was not very efficient as the water spread would not cover a half a road at a time.

Discussion of Solution:

This summer we purchased a 3-inch Honda powered pump to install on the tanker. We built a platform in front of the tires to mount the pump on. We reduced the 4-inch outlet to 3-inch and plumbed it to the inlet side of the pump with a hand controlled lever valve and a tee to install a suction hose so we could load out of any water source. From the outlet we installed a flex pipe with cam lock fittings to another tee. One side of the tee was fitted with an air controlled spray head, the other side of the tee with an air controlled butterfly valve. This was done to re-circulate the water back into the tanker or to the spray head. The tanker will now spray a road width pattern at a faster speed. This adds 4 to 5 loads of water sprayed in a shift. With both 3-inch and 4-inch inlet fittings the tanker can be loaded in around 15 minutes. The 3-inch pump alone will load the tanker in about 45 minutes in a water source where the 4-inch pump will not work due to low water volume.

Savings & Benefits:

The water tanker this year has been the main reason our Mag Chloride program has continued, due to the drought we have had to haul water as far as 20 miles to continue our Mag program. To rent an equivalent unit would cost \$85.00 per hour, for a 10 hour shift this is a total cost of \$850.00 per day. The design and labor of my shop mechanic Pat Antonelli and one of my operators Jim Stewart made this conversion from a hot oil tanker to a highly usable water spray tanker an efficient time and money saving project.

