



MISCELLANEOUS

CLEANING OF A CARBON STEEL TANK USED FOR STORAGE OF PROTEIN BASED FOAM CONCENTRATES

DESCRIPTION

The following is recommended for the cleaning of a carbon steel tank that has been used for the storage of a protein based foam concentrate.

- If the tank is part of a Fire Protection System, isolate the tank from the system and notify the respective authority that the Foam Fire Protection System is being removed from service.
- Drain any remaining foam concentrate from the storage tank. If disposal of the foam concentrate is required, dispose of it in accordance with state or local environmental regulations.
- Once the tank is completely drained, flush several times with fresh water or until the water comes out clean and without foaming.
- Fill the tank with water and add an industrial grade detergent to the water in the correct proportion and allow to sit in the tank 2 - 3 hours.
- Flush with fresh water.
- Fill the tank to about 90% full and top off the balance with a 15% (by weight) solution of trisodium phosphate (TSP.)
- Allow to remain in the tank for approximately 4 - 6 hours.
- Drain the tank and flush well with fresh water.
- Clean and replace if necessary any pressure vacuum vent valve, manual valves, check valves and strainers.
- After the above procedures are followed and scale rust remains present inside of the tank, it may be necessary to sand blast the tank interior. After sandblasting ensure that ALL scale and sand is removed from the tank interior before refilling the tank.

- Before refilling the tank with the new foam concentrate, check the tank integrity to ensure that there are no weak spots in the shell.

NOTE:

- If the tank is to be refilled with AFFF, AR-AFFF or any synthetic foam concentrate, it is important that the foam concentrate storage tank not be painted or have an internal lining. The storage tank and the lining have different coefficients of thermal expansion. As the ambient temperature changes, separation of the lining from the tank wall can occur. AFFF and AR-AFFF concentrates have excellent wetting characteristics. If a crack develops in the lining, the concentrate will quickly seep between the tank wall and the lining resulting in lining failure, corrosion problems and possible tank failure. In addition, small pieces of the lining may break away and clog strainers or block foam concentrate orifices.
- After the tank has been filled with the correct type of foam concentrate, notify the authority having jurisdiction that the Foam Fire Protection System is being placed back in service.

IMPORTANT

The above procedure is for the refilling of a protein based foam concentrate storage tank with AFFF or other synthetic type foam concentrates. It does NOT cover the servicing of the balance of the Foam Fire Protection System or changing of any foam concentrate orifices in the proportioners. It is recommended that where any mild steel piping has been used with undiluted protein based foam concentrate that it be flushed and cleaned in accordance with the storage tank procedures.

