A Goodwin Group Company

RapidCool ™Coolant Test in a Typical Acetylene Gas Filling Operation.

Test Parameters:

1. A 2000 gallon storage tank.
2. Estimated evaporation water loss 100 gallons per day, 250 days per year equals 25,000 gallons annually.
3. Assume you can add coolant and water automatically with an eductor or small pump to keep the storage tank full. This can be designed easily for your system by your company technical staff.
4. At $50.00 per gallon for the coolant, 100 gallons per day water loss, using a 1% coolant to water ratio the cost to treat the water is approximately $12,500 annually.
5. This figure includes the necessary coolant and biocides for treating the water in your system.

Water Treated with *RapidCool™Coolant* Added @ 1%

Test One

Beginning cylinder temperature **. . . . .71° F.**

Air Temperature **. . . . . .71° F.**

Maximum fill temperature **. . . . . 80° F.**

Fill Time 10:48-10:53 am **. . . . . 5 minutes**

Cool down **. . . . . .**2 minutes **. . . . . 75° F.**

Test Two
Water Treated with *RapidCool™ Coolant* Added @ 1%

Beginning cylinder temperature **. . . . 95° F.**

Air Temperature **. . . . . 95° F.**

Maximum fill temperature **. . . . . 85° F.**

Fill Time 1:00-1:05 pm **. . . . . 5 minutes**

Cool down **. . . . .** 2 minutes **. . . . . .75° F.**

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RapidCool™ Coolant Test in a Typical Acetylene Gas Filling Operation (continued).

Test One
Untreated Water as a Coolant

Beginning cylinder temperature . . . . **71° F.**

Air Temperature . . . . . **71° F.**

Maximum cylinder temperature . . . . **80° F.**

Fill time 10:48-10:53 am . . . . . **5 minutes**

Cool down . . . . . 2 minutes . . . . . **75° F.**

Test Two
Untreated Water as a Coolant

Beginning cylinder temperature . . . . **95° F.**

Air Temperature . . . . . **95° F.**

Maximum cylinder temperature . . . . **130° F.**

Fill time 1:00-1:05 pm . . . . . **5 minutes**

Cool down . . . . . 2 minutes . . . . . **100° F.**

Summary: Several tests were conducted while filling acetylene cylinders when the air temperature was 71° F. The ***RapidCool™ Coolant*** provided excellent cooling, even in moderately cool temperatures. The product provided additional cooling at higher air temperatures. The effectiveness of the coolant treated water improves dramatically as the air temperature and cylinder temperature increase. When the air temperature was 95° F. ,the cylinder temperature decrease was substantially more (25-40° F.) than when it was 71° F.

Other Benefits:

1. The water in the storage tank treated with the coolant did not grow algae and produce any

RapidCool™ Coolant Test in a Typical Acetylene Gas Filling Operation
(continued)

2. odor because the coolant has biocides that keep the water from growing algae.

3. It is very easy to identify acetylene cylinders with leaky bases. They produce a line of suds at the base along the floor.

4. The floor areas in the filling area remain extremely clean from the treated water.

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