

Topnotch Pump Film

This is the third Allis-Chalmers pump film. The first two, in June and Oct. POWER, covered maintenance and operating facts. Here we cover many phases of pump selection. For a complete showing of this fine talkie, contact AC

By JOHN GAMMELL, Supervisor of Sales Training, Allis-Chalmers Manufacturing Co

COVERING ALL ANGLES

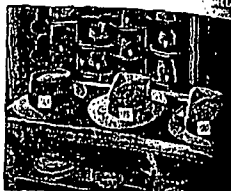
1 This film shows you an excellent way to select pumps for your plant



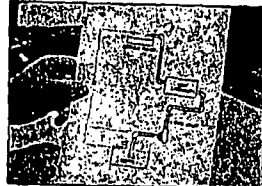
5 Then his trusty slide rule said, "I got an idea that may give you help"



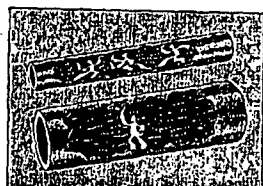
6 "How do you pick a hat?" "Well, first I settle on right size so it fits"



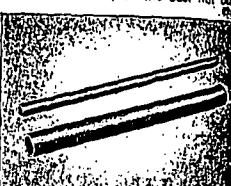
7 "Then I decide on color and After that I pick the best hat"



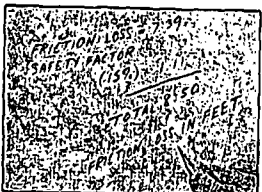
11 Pump Johnny is figuring is for this system that he has sketched here



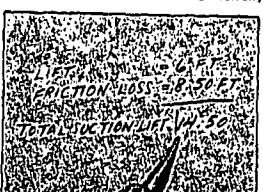
12 Pipe friction losses pile up fast, as the square of the fluid velocity



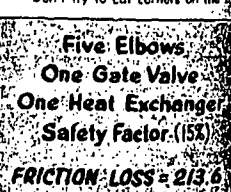
13 That's why pipe size is so important. Don't try to cut corners on the



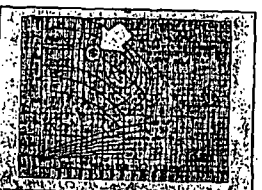
17 To this friction loss we add safety factor of 15%. Total loss is 8.5 ft



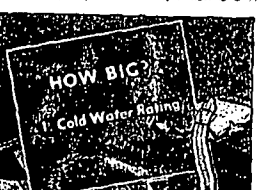
18 To the suction friction we must add the pump suction lift, which is 6 ft



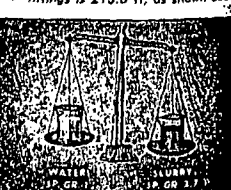
19 Discharge-side friction loss for the fittings is 213.6 ft, as shown above



23 All charts are based on handling of cold water. Once we know this we...



24 Can tackle anything else that may determine how big our pump must be



25 One factor is liquid weight. Liquid heavier than water needs more



2 a young engineer, is stuck. He can't pick pump right from all angles



3 He figured and figured, and though he knew his pumps he had too many



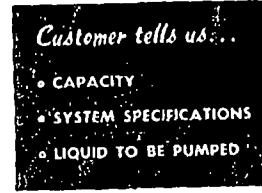
4 The pump could be an centrifugal or an SSB. Or he could use a Type S...



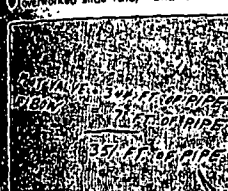
8 "This game with pumps," said the overworked slide rule, "and it works"



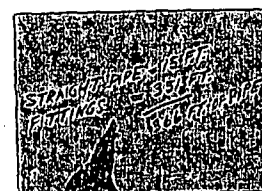
9 Your first question is how big pump must be. That is, how many gpm



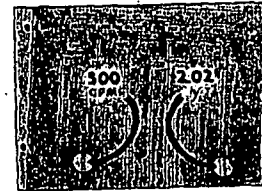
10 The man buying pump must tell maker gpm, pipe details, liquid



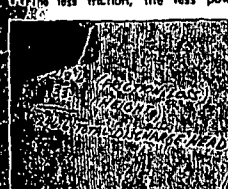
14 Make the valve and fitting losses. The less friction, the less power



15 Figure straight-pipe loss, too. Add it to fitting loss for total loss



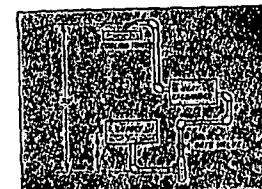
16 Standards table shows loss in 6-in. pipe is 2.02 ft/100 ft for 300 gpm



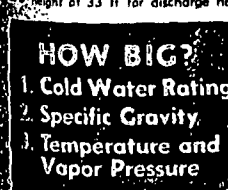
20 Add total friction loss to the net height of 33 ft for discharge head



21 Total head on the pump is sum of discharge head and the suction lift



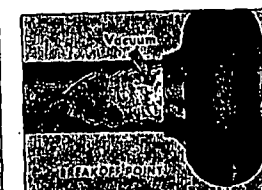
22 Of course, if supply is above pump we subtract suction from discharge



26 Factors we must consider next are liquid temperature, vapor pressure



27 All liquids tend to evaporate. Force causing this is the vapor pressure



28 Higher liquid temperatures may lead to flashing and loss of pump suction