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Effect of free board on amount of losses in flume and irrigation canal in Sistan plain

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Abstract

Network of irrigation and drainage channels in Sistan Plain Grade 3 or 4 in the half-pipe flume were created. Among the main factors reducing the efficiency of water transfer in Sistan plain water flume network, you can stream to overflow the flume wall, evaporation from the free surface of seam sealing. Due to the lack of water in Sistan Plain, the percentage of deaths due to evaporation, overflow currents can play an important role in management practices in order to increase the transmission efficiency of the channel is. In this study the half-pipe irrigation flume type the new campus of the University of Agriculture research station was installed in 1000. After evaporation losses measured half pipe entering the free height of the flume, and considering different speeds of wind, pan coefficient flume and pan coefficient channel was calculated from the channel and flume. Results indicate that the maximum wind speed at release height of 120-day mortality rate is reduced Drflvm channels and channel losses are negligible compared to the flume. Rising temperatures also increase evaporation and wind speed on impact and increases evaporation losses. Most deaths caused by water flowing in the wind of the half-pipe in the early morning hours when wind speed is greater than that seen in other situations. Overall losses due to evaporation and wind water overflow pipe half after 24 hours of experiment shows that rising temperatures also increase evaporation and wind speed on impact.

Keywords: Free board,Wind, Channel, Flume, Pan coefficient channel, Pan coefficient flume