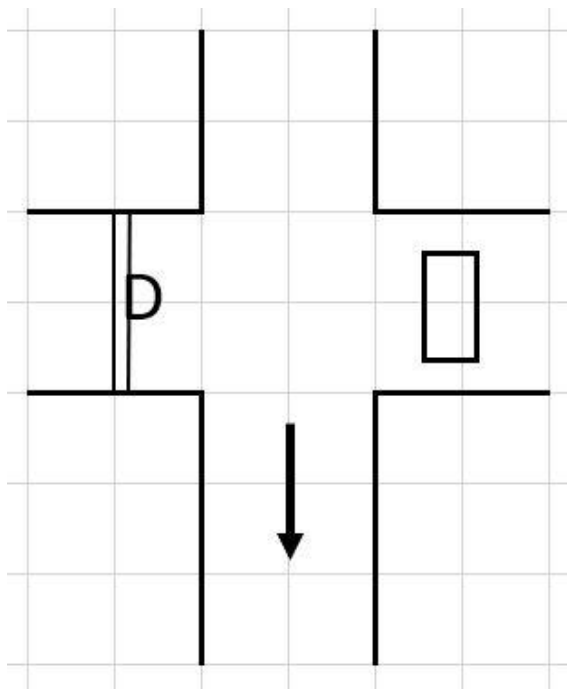


Tech Problem

The Halfway Do it Mine is a 3-entry development. Air enters the mine through the #3 entry and exits the mine through the #1 and #2 entries. You are standing in the #2 entry. You will need to determine the airflow in the #2 entry using a vane anemometer and using a smoke tube. Take a reading from the test port in the permanent stopping with man door between the #1 and #2 entries using the magnehelic gauge.

Field Set-Up



Field Set-Up Notes

Use 10 feet widths on the field. The pipe used for height can be anything measurable. I am providing the heights and widths for each exercise (anemometer and smoke tube). They will be different.

Anemometer

Width 19.5 feet

Height 4.5 feet

Anemometer Reading – “See Anemometer Picture”

Anemometer Reading is 535 ft/min

Correction Factor is -6

Corrected Anemometer Reading is 529 ft/min

Area is 87.75 ft²

Airflow is 529 ft X 87.75 ft² = 46,419.75 CFM

Smoke Tube

Width 19 feet

Height 5 feet

Smoke Tube – measure off 10 feet

Quadrant 1 time is 12 seconds

Quadrant 2 time is 13 seconds

Quadrant 3 time is 15 seconds

Quadrant 4 time is 10 seconds

Avg Time = 12.5 sec

Velocity = 10 ft/12.5 sec = 0.8 ft/sec = 48 ft/min

Area = 95 ft²

Air Flow = 95 ft² X 48 ft/min = 4560 CFM

Magnehelic

Magnehelic Reading – “See Magnehelic Picture”

Magnehelic Reading is 0.22 in H₂O

Reflected as “Positive” [should use high pressure hose]



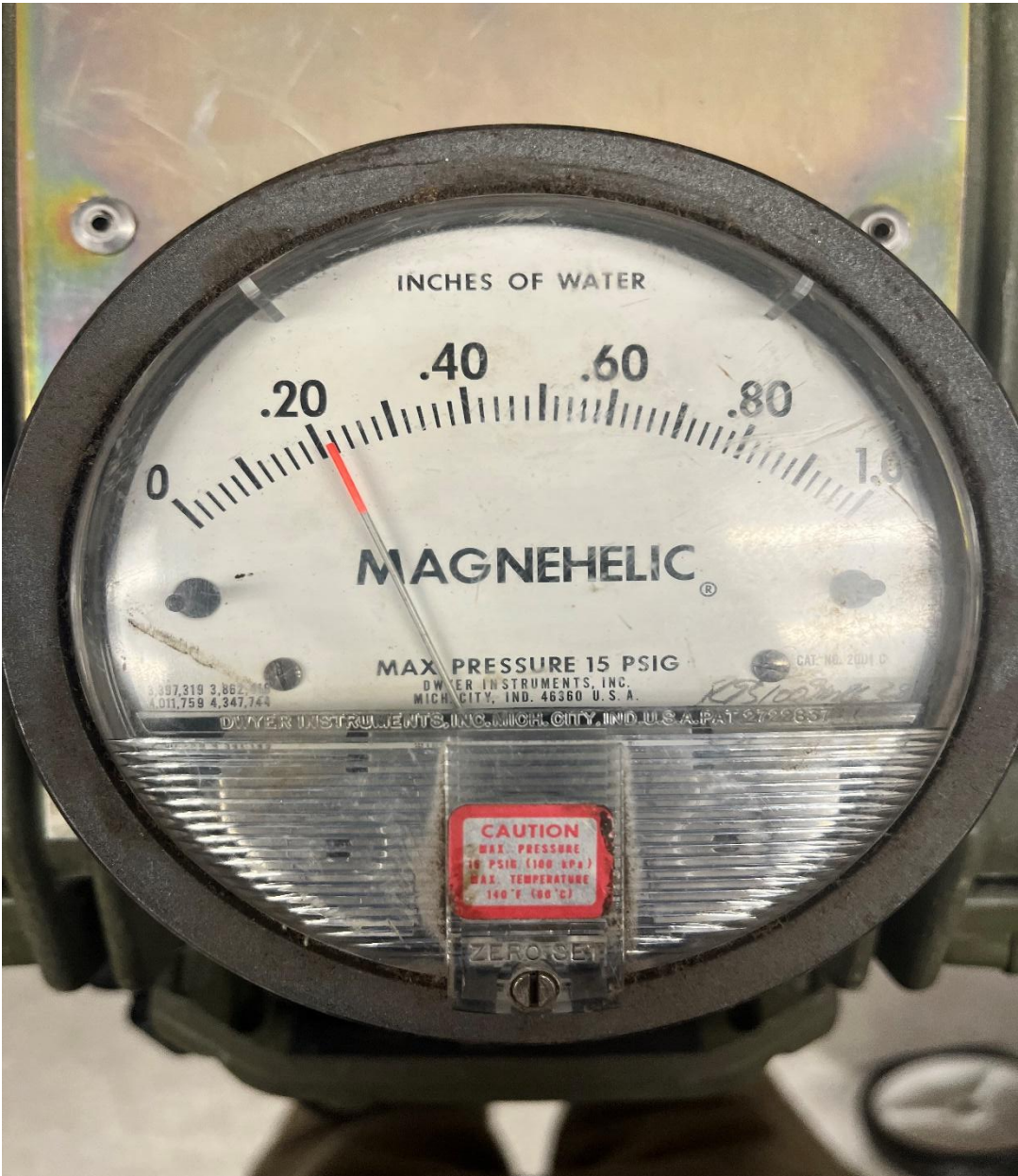
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BALTIMORE, MARYLAND.
MADE IN U.S.A.

9000
8000
7000
6000
5000
4000
3000
2000
1000
0

900
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700
600
500
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200
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BALL BEARING

90
80
70
60
50
40
30
20
10
0



INCHES OF WATER

0 .20 .40 .60 .80 1.0

MAGNEHELIC®

MAX. PRESSURE 15 PSIG
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CAUTION
MAX. PRESSURE
15 PSIG (100 kPa)
MAX. TEMPERATURE
140°F (60°C)

ZERO SET