Event: PipeCharge

Description

This event is about designing a pipe network to distribute water by gravity at each outlet uniformly.

General Rules

<table>
<tr><td colspan="3">Mandatory Clause</td></tr>
<tr><td>1.</td><td>Pipe Network:</td><td>Main Pipe:
- Main pipe can be extended longitudinally or into branches as per participants convenience each spanning 0.3 m only.
Branch Pipe:
- Provide a total of six no’s (Not more or less) of branch pipes from Main Pipe.</td></tr>
<tr><td>2.</td><td>Pipe Diameter:</td><td>Main Pipe:
-- Main pipe should be of 1-inch in diameter.
Branch Pipe:
- Branch pipe can be of 1-inch, 0III-inch, 0II-inch in diameter.
- It is allowed to use different diameter pipe for different branch pipe.</td></tr>
<tr><td>3.</td><td>Length of Branch Pipes:</td><td>Main Pipe:
- length of all the parts of Main Pipe should be 0.3 m, as stated earlier.
Branch Pipe:
- 15 cm each.</td></tr>
<tr><td>4.</td><td>Material:</td><td>- following material will be given to each group for network.
<table>
<tr><td>Diameter</td><td>Length</td><td>Number</td></tr>
<tr><td>1”</td><td>0.3 m</td><td>6 NOs</td></tr>
<tr><td>1”</td><td>0.15 m</td><td>6 NOs</td></tr>
<tr><td>OIII”</td><td>0.15 m</td><td>6 NOs</td></tr>
<tr><td>OII”</td><td>0.15 m</td><td>6 NOs</td></tr>
</table>
Sufficient connection will be provided, such as T-junctions, four-way junctions, reducers, and end caps.</td></tr>
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</table>

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Mode of Testing		
1	Pipe Network Inclination:	Inclination in main and branch pipe can be given as per the participant requirement.
2	Discharge:	A Sufficient Volume of water will be passed through pipe network with sufficient Head of Water.
3	Rounds:	Total 3 number of rounds of testing for respective network will be employed. - Participate can modify network based on its performance observed in the previous rounds, for succeeding round.
Testing Criteria		
1.	Volume:	Accumulated Maximum and Minimum Volume out of six outlet buckets will be noted.
2	Failure mode:	Testing will be Stopped If Volume in any one outlet bucket exceeds twice of Average volume. and it will be considered as Failure of Distribution System.
Judging criteria		
- Best Distribution System will be judged based on Equal distribution of Water Volume in each six-outlet bucket. - For that Difference Factor will be the judging criteria. The sum of Difference Factor in each round will be set in Ascending order which will decide respective Ascending order of winner. Difference Factor $=$ (Max Volume in Outlet $-$ Average Volume) OR (Average Volume – Min Volume in Outlet) } Whichever is greater.		

1. Minimum 2 and Maximum 4 Participants allowed in a team. Maximum 10 teams will be allowed to participate on the first come first serve basis.
2. The decision taken by Event coordinators/ Judges will be considered as final.
3. Reporting time will be 8:30 AM on the day of Event.
4. All team will be provided one set of pipes and connections for assembly prior to testing.
5. Students will be given 10 minutes for assembling their network.

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Faculty Coordinator

1. Prof. Chintan Raichura
2. Prof. Arjun Chavada

Student Coordinator

1. Arpit Sherasiya (8347700804)
2. Dhruv Padsumbia (7621965770)