CE3105 Mechanics of Fluids Laboratory, Department of Civil Engineering,Texas Tech University
Experiment:Forces on Plane Surfaces,Archimedes' Principle - Data Sheet
Date of Experiment:
Name:

| Temperature of water, $\mathrm{T}=$ | Celsius | Water density, $\rho=$ |  |  |
| :--- | :--- | :--- | :---: | :---: |
| $\mathrm{R} 3=200 \mathrm{~mm}, \mathrm{R} 2=200 \mathrm{~mm}, \mathrm{R} 1=100 \mathrm{~mm}$ |  |  |  |  |


| Archimedes' Principle |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Object | Water |  |  | Volume of Object <br> (measured) | Volume <br> Calculated | Mass of Object | Submerged |
|  | V (Initial) | $\mathbf{V}$ (Final) |  |  |  |  |  |
| Asphalt 1 |  |  |  |  |  |  |  |
| Asphalt 2 |  |  |  |  |  |  |  |
| Wood 1 |  |  |  |  |  |  |  |
| Wood 2 |  |  |  |  |  |  |  |
| Concrete 1 |  |  |  |  |  |  |  |
| Concrete 2 |  |  |  |  |  |  |  |

Forces on Plane Surfaces -Partially Submereged

| Trial | Weight | $\mathbf{h}$ | $\mathbf{b}$ |
| :---: | :---: | :---: | :---: |
| Initial |  |  |  |
| $\mathbf{1}$ |  |  |  |
| 2 |  |  |  |
| 3 |  |  |  |
| 4 |  |  |  |
| 5 |  |  |  |


| Forces on Plane Surfaces -Fully Submereged |  |  |  |
| :---: | :---: | :---: | :---: |
| $b=180$ |  |  |  |
| Trial | Weight | h |  |
| Initial |  |  |  |
| 1 |  |  |  |
| 2 |  |  |  |
| 3 |  |  |  |
| 4 |  |  |  |
| 5 |  |  | Instructor's Signature |

