

# PELTON WHEEL EXPERIMENT

## DATA SHEET

ME 436: AERO-THERMAL-FLUIDS LABORATORY

DR. GOUSHCHA

THE CITY COLLEGE OF NEW YORK, NY

DATE OF THE EXPERIMENT:

\_\_\_\_\_

GROUP #:

\_\_\_\_\_

NAMES:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Uncertainties

Time ( $u_t$ )	
Volume ( $u_V$ )	
Pressure ( $u_P$ )	
Spring Force ( $u_S$ )	
Tachometer ( $u_\omega$ )	TBD

SET 1:	PRESSURE =			FLOWRATE=			
Mass ( $g$ )							
Spring Mass ( $kg$ )							
Rotations ( $rpm$ )							

SET 2:	PRESSURE =			FLOWRATE=			
Mass ( $g$ )							
Spring Mass ( $kg$ )							
Rotations ( $rpm$ )							

SET 3:	PRESSURE =			FLOWRATE=			
Mass ( $g$ )							
Spring Mass ( $kg$ )							
Rotations ( $rpm$ )							

INTSRUCTOR SIGNATURE:

\_\_\_\_\_

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SET 4:	PRESSURE =			FLOWRATE=			
Mass (g)							
Spring Mass (kg)							
Rotations (rpm)							

SET 5:	PRESSURE =			FLOWRATE=			
Mass (g)							
Spring Mass (kg)							
Rotations (rpm)							

TACHOMETER UNCERTAINTY	
N	(rpm)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	

$$s_x = \sqrt{\frac{1}{N-1} \sum_{n=1}^N (x_n - \bar{x})^2}$$

$s_x$	
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$$s_{\bar{x}} = \frac{s_x}{\sqrt{N}}$$

$s_{\bar{x}}$	
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$t_{95}$	
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$$u_x = \sqrt{(u_{Single\ Point})^2 + (t_{95} s_{\bar{x}})^2}$$

$u_x$	
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