



**NATIONAL TESTING STANDARDS INC.**  
**RESEARCH AND TESTING LABORATORIES**

Report No. 30518-1

May 27, 2011

Client: Jensen Swing Products, Inc.  
 9327 Weatlands Rd.  
 Santee, CA 92071

Reference: Charvet Vecchio  
 Letter of 05/17/11

Subject: Chemical Analysis of Metal Pendulums.

**Sample Description:**

Two cast metal parts were submitted by the Client and identified as pendulums, one round and one square.

**Request:**

Quantitatively analyze each of the submitted samples for elemental content.

**Method:**

An aliquot from each sample was separately analyzed in accordance with the procedures set forth in ASTM E-357 which is referenced in ASTM A-439.

**Results:**

<u>Element</u>	<u>Round</u>	<u>Square</u>	<u>Required (%)</u>
Total Carbon	2.49	2.53	3.0 max.
Silicon	2.15	2.30	1.5-3.0
Manganese	0.75	0.69	1.0 max.
Phosphorous	0	0	0.08 max.
Nickel	21.7	20.9	18-22
Chromium	2.32	2.49	1.75-2.75

**Comments:**

Both of the submitted samples meet the general chemical requirements for a general ductile iron.

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 by Lewis F. West