8-Foot High Temperature Tunnel

6/18/97 10:34:09 AM

Activity:

National Aeronautics and Space Administration
Langley Research Center

HAMPTON, Virginia 23681
United States

Updated as of: Mar 20, 1996

Facility Type:

- Propulsion Testing
- Wind Tunnels
- Wind Tunnels, Hypersonic

Description:

The 8-Foot High Temperature Tunnel is a true-temperature hypersonic blowdown facility that achieves the required energy levels by burning methane in air under pressure. The combustion gases can also be enriched with oxygen to produce a 21 percent oxygen test medium. The facility's size, testing range, and long run times make it unique in its ability to test propulsion systems, to verify structural components, and provide detailed aerothermal loads definition at flight conditions. The facility has Mach 4 and Mach 5 nozzles, and oxygen enrichment capability. The facility is supported by 6000 psi air and methane storage, LOX, hydrogen, and silane systems. Other supporting systems include automated control, 1556 channel data, acquisition and processing, and real-time and post-run display systems.

Available data file(s)
- Hypersonic Wind Tunnel Facilities

Facility Capability:

- hypersonic tunnel
- propulsion research test
- scramjet test
- wind tunnel/hypersonic

Parameters:
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<thead>
<tr>
<th>Name</th>
<th>Unit of Measure</th>
<th>Values</th>
<th>Type</th>
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<tbody>
<tr>
<td>altitude simulation</td>
<td>feet</td>
<td>60000.0</td>
<td>130000.0</td>
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<tr>
<td>dynamic pressure</td>
<td>pounds/sq-foot</td>
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<tr>
<td>mach #</td>
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<td>reynolds #</td>
<td>millions per foot</td>
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<tr>
<td>total pressure</td>
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<tr>
<td>total temperature</td>
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Programs Supported:

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<tr>
<th>Program</th>
<th>Customer</th>
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<tbody>
<tr>
<td>Space Shuttle</td>
<td>National Aeronautics and Space Administration</td>
<td>1975</td>
<td>1988</td>
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<tr>
<td>DOD Reentry Vehicles</td>
<td>Department of Defense</td>
<td>1975</td>
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<td>NASP CDF</td>
<td>USAF/NASA</td>
<td>1993</td>
<td>1995</td>
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Status:

Percent Utilization: 100%
Based On: 2
Occupancy Year: 1960
Current Status: Active
Condition: Good
Non Owner Use: Yes
Military: Yes
Civilian Government: Yes
Commercial: Yes

Contact:
For information concerning the facility described on this page contact:
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