

COMBUSTION RESEARCH LAB

CELL 23 FACILITY OUTLINE

DESCRIPTION :

CRL Cell 23 contains a Hydrocarbon Fuel Combustion Test Rig. In this facility various fuels are burned in pre-heated air to determine fuel performance characteristics and emission levels. The maximum fuel flow rate is 4 GPM at ambient temperature and 400 PSI pump pressure. The combustor operating pressure is approximately 2 atmospheres at maximum inlet air flows. The air heater which provides the oxidizing air can provide a flow rate from 0.5 to 2.0 PPS at 10 atmospheres pressure and can heat air to 2000 F. Exhaust gases from the combustion tests are vented through a roof-top flare stack burner where any unburned fuel entrained in the exhaust is oxidized. Cell 23 control room provides direct observation of the test rig during operation. Data acquisition is performed using an Escort minicomputer. A visicorder data logger is used to observe transient data.

CAPABILITIES :

- * COMBUSTION TESTING OF HYDROCARBON FUELS AT CONTROLLED TEMPERATURES AND PRESSURES - 4 GPM maximum, 400 PSI
- * OXIDIZING AIR PRE-HEATER - 0.5 - 2.0 PPS at 10 atmospheres and 2000 F
- * VARIABLE DURATION RUNS - From seconds to hours
- * EMISSION GAS MEASURING SYSTEM

DATA ACQUISITION SYSTEMS :

- * ESCORT MINICOMPUTER
256 channels at 1 sample/sec./channel
- * VISICORDER CHART RECORDER
- * VIDEO CAMERA - Monitored from control room

SERVICES :

- * GN2 VIA CRL CENTRAL SUPPLY - 2200 PSIG MAX
- * AIR VIA CENTRAL SUPPLY - 125 PSIG MAX
- * CITY WATER SUPPLY - 40 PSIG

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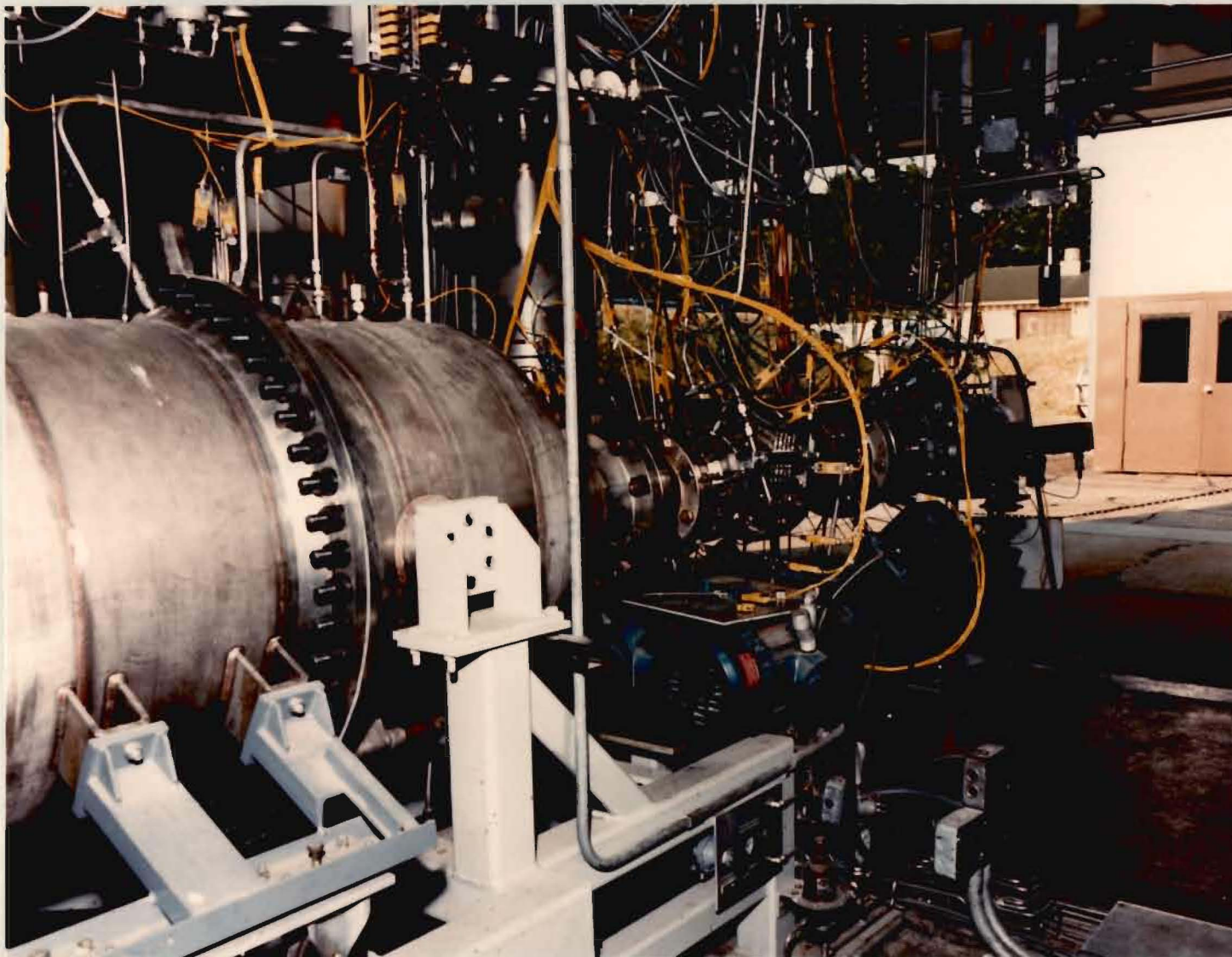
CELL 23 CONTROL ROOM



CD-88-35805

COMBUSTION RESEARCH LAB

CELL 23



CD-88-35806

COMBUSTION RESEARCH LABORATORY
FACILITIES CATALOG

Prepared for
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