



Test code: 3.2.19

Hyperion lab devise Functional & Performance Test protocol

Test Plans & Test Results

By: Defkalion GT S.A. R&D Team

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Hyperion devise Functional & Performance Test Plans & Test Results

TEST plan 3.2.17

Hyperion reaction triggering procedures

Overview

The 3.2.17 scheduled test on Hyperion reactions triggering procedures is part of the series of triggering and performance tests of Hyperion reactor reactions focusing to investigate conditions that influence reaction's triggering and performance versus expected phenomena.

Test Description; Sub-Systems/ Critical Components Being Tested; Main test objectives; Secondary test objectives

Test description

3.2.15 testing of Hyperion Single Reactor Kernel will follow the same procedure as for all 3.X.X testing protocols. Reaction will be triggered in the R5 type reactor (R5.1, using the following test parameters:

Test parameter	Condition	Remark
Atomic Hydrogen production method	SP	As identified in ICCF17 paper by J. Hadjichristos et al
Internal structure	Typical 5.1	
Calibration and control	Calibration of instrumentation Control run using Argon	Argon run follows the H2
Leakages control	Yes	With the use of AccuprobeUV at, vacuum and H ₂ under pressure at min 10bar
Ni mixture	No 8 sample, prepared 2,4gr	
Vacuum	Yes	With parallel heating up to 200C, for 25min
Electric pre- heating	Yes	
H ₂	1 st input: 1,5 bar 2 nd input, 15 bar when reaching mixture temp at >400C if required	
Safety levels	Not changed	

Sub-Systems/Critical Components being tested

R5 Kernel reaction ignition

Reaction ignition is expected following the atomic hydrogen production only with the method SP (high voltage spark generator)



