ISO/TC 197
Hydrogen technologies

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Progress Report of WG20 2015.12

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Expected action: INFO

Background: This is a presentation from the 2015 plenary meeting in California.

Committee URL: http://isotc.iso.org/livelink/livelink/open/tc197

WG20
Gaseous hydrogen -Fueling stations
-- Valves
ISO 19880-3

December 2015

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Convener

Basic idea of WG20 procedure

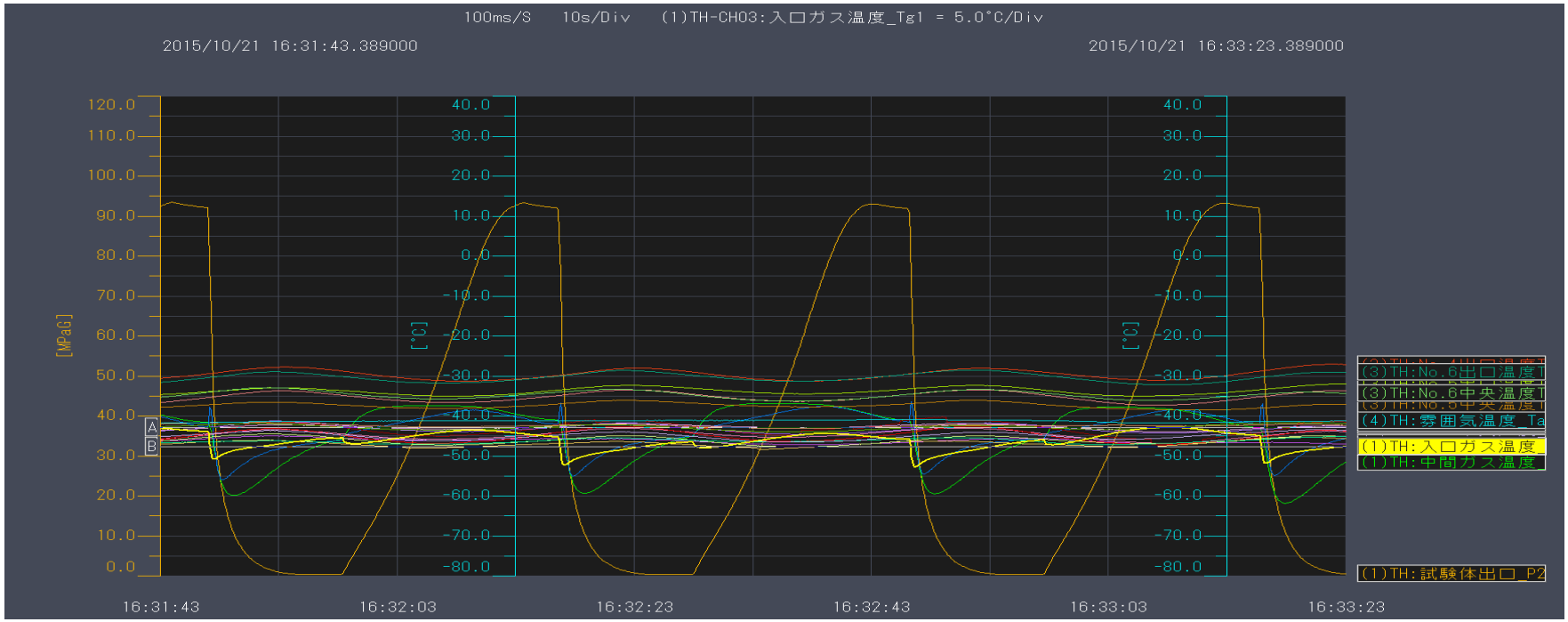
1. Harmonizaation with WG24 (Hydrogen fueling stations)
   Consistent with WG24 on terms and definitions, specific number such as pressure, temperature, safety margin and so on.
2. WD 19880-3 partially refers the document to CSA HGVs.
   Replace the referred local codes, standards and regulations such as CSA HGVs, ANSI, ASME, NFPA and UL to ISO, IEC or other international CSRs.
3. Change the unit systems from U.S. customary unit (inch, pound, Fahrenheit) to IS unit (meter, kilogram, Celsius) .

Result of voting CD2 as a DIS

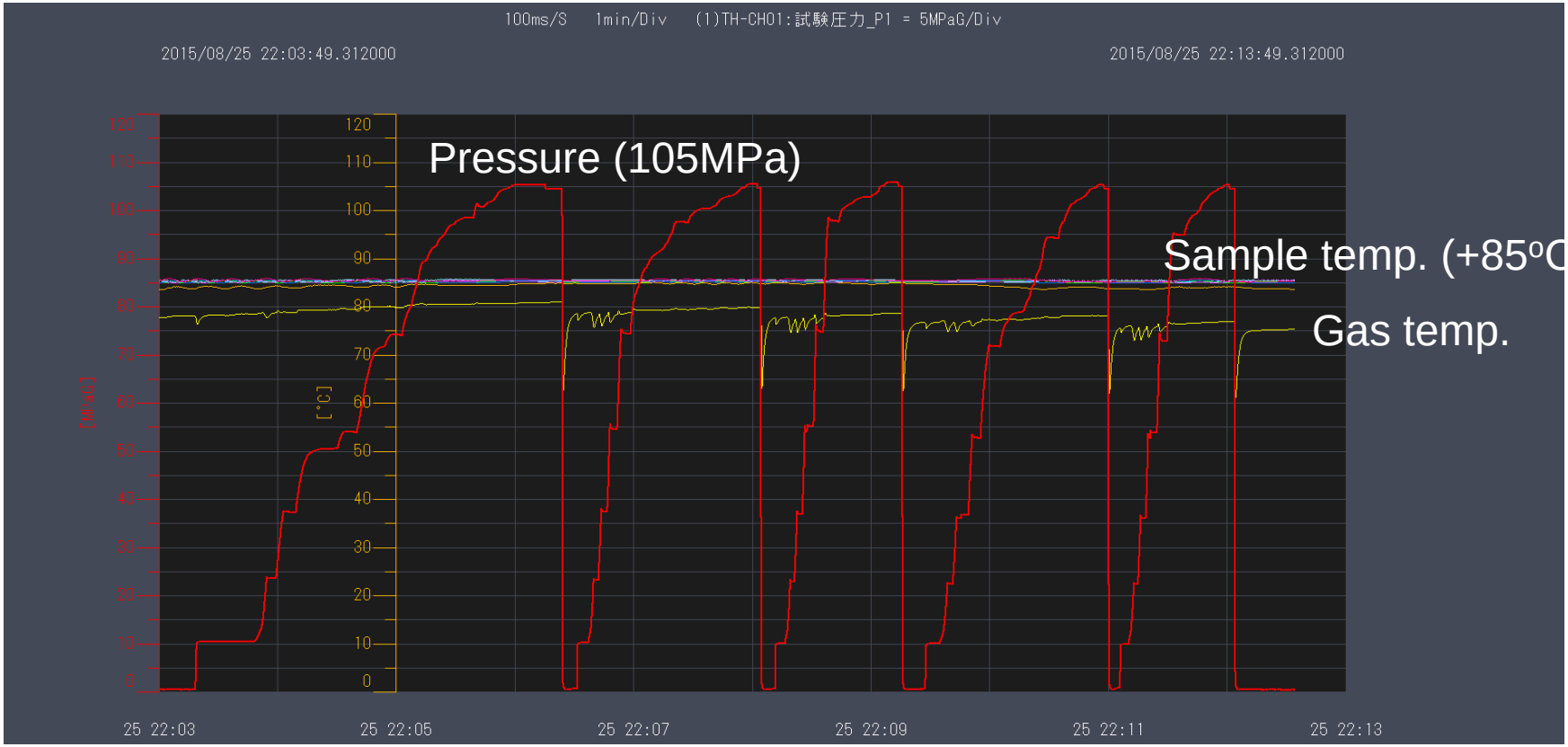
7 x Yes, Canada, Czech, India, Japan, Korea, Russia, UK
1 x Yes with comments: China
1 x No US

Comment from US
This document should not proceed past the draft stage until it has been attempted in the real world.

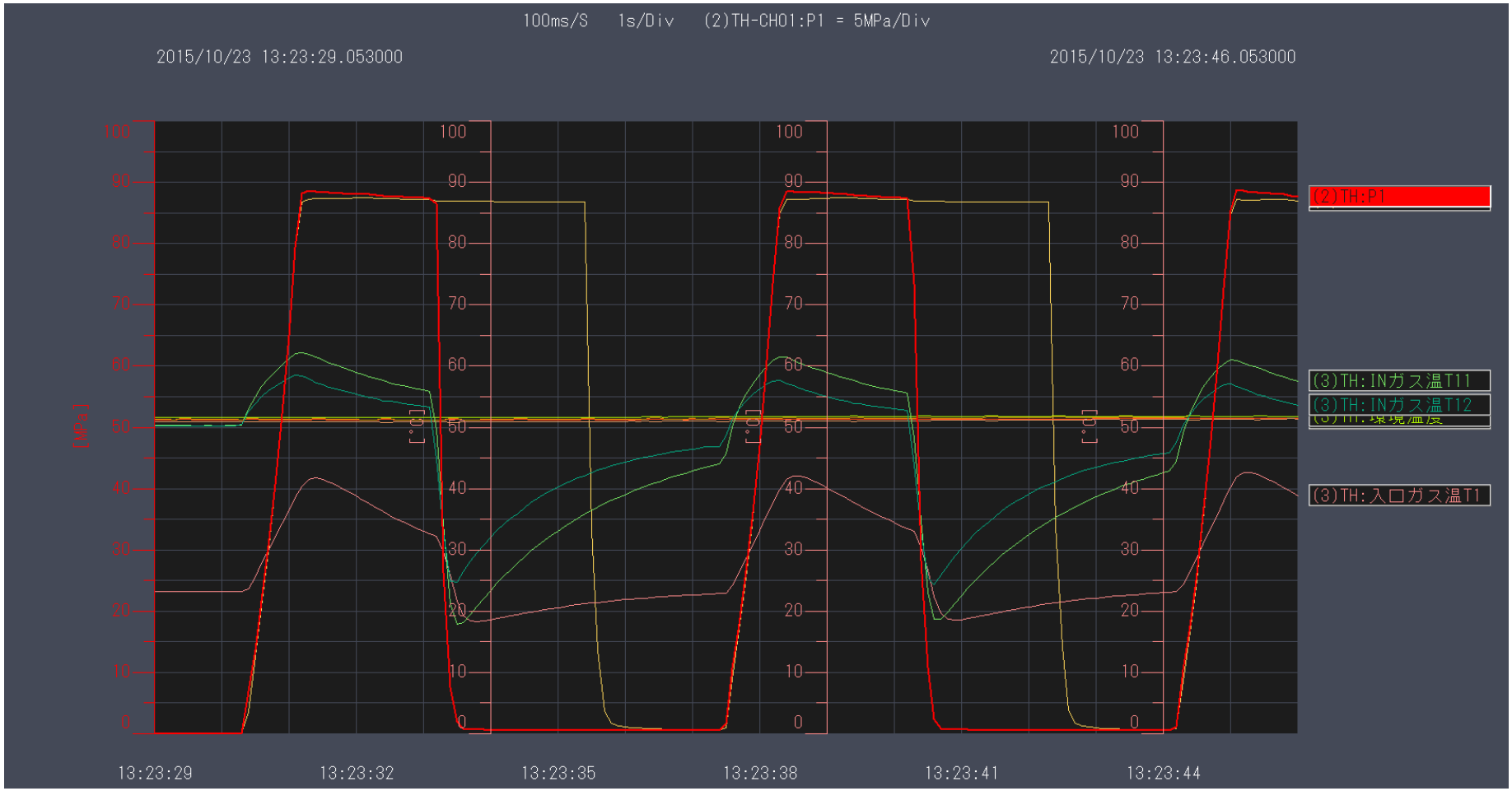
Proposed change
The U.S. recommends that the test methods and criteria utilized in this document be verified prior to DIS ballot to:
1) Demonstrate practicality of the tests; and
2) Demonstrate that components proven to be acceptable for hydrogen service can pass the tests.



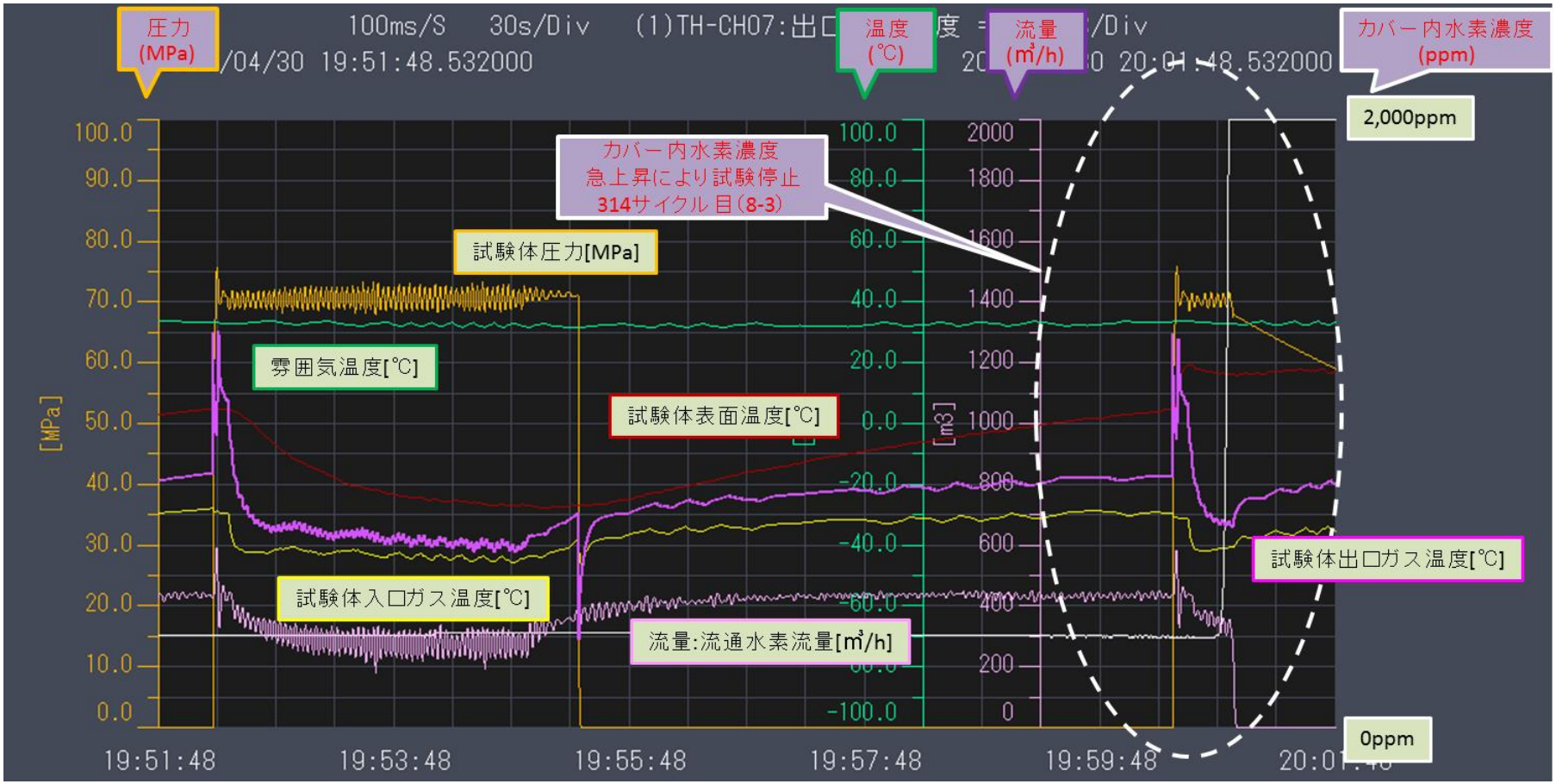
Example of hydrogen gas pressure cycle test at low temperature (-40℃)



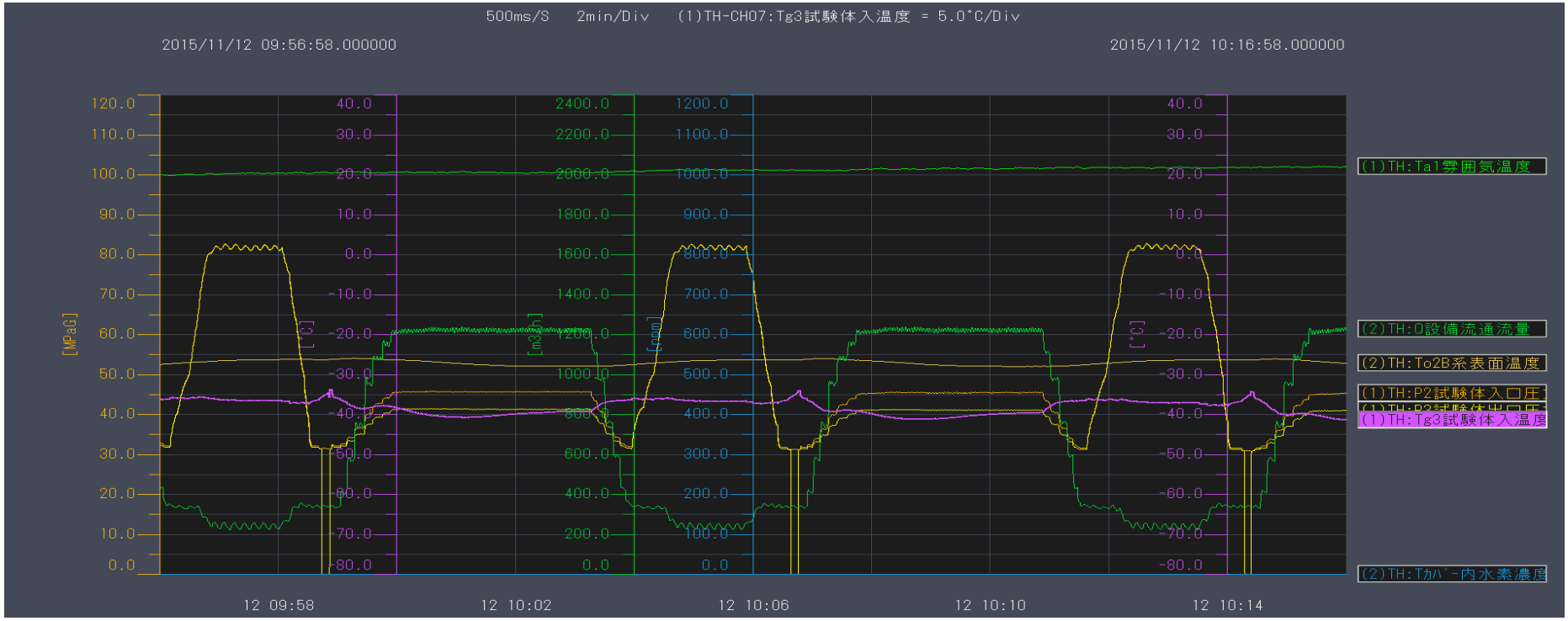
An example of high pressure hydrogen gas cycle test at high temperature.



An example of hydrogen gas pressure cycle test of a check valve at 50℃



An example of cold gas in warm valve test



Another example of cold gas in warm valve test

Clarify the scope according to comments

Scope (Present)

This ISO 19880-3 provides the requirements and test methods for the safety performance of high pressure gas valves that are used in gaseous hydrogen stations **of 35MPa or 70MPa**.

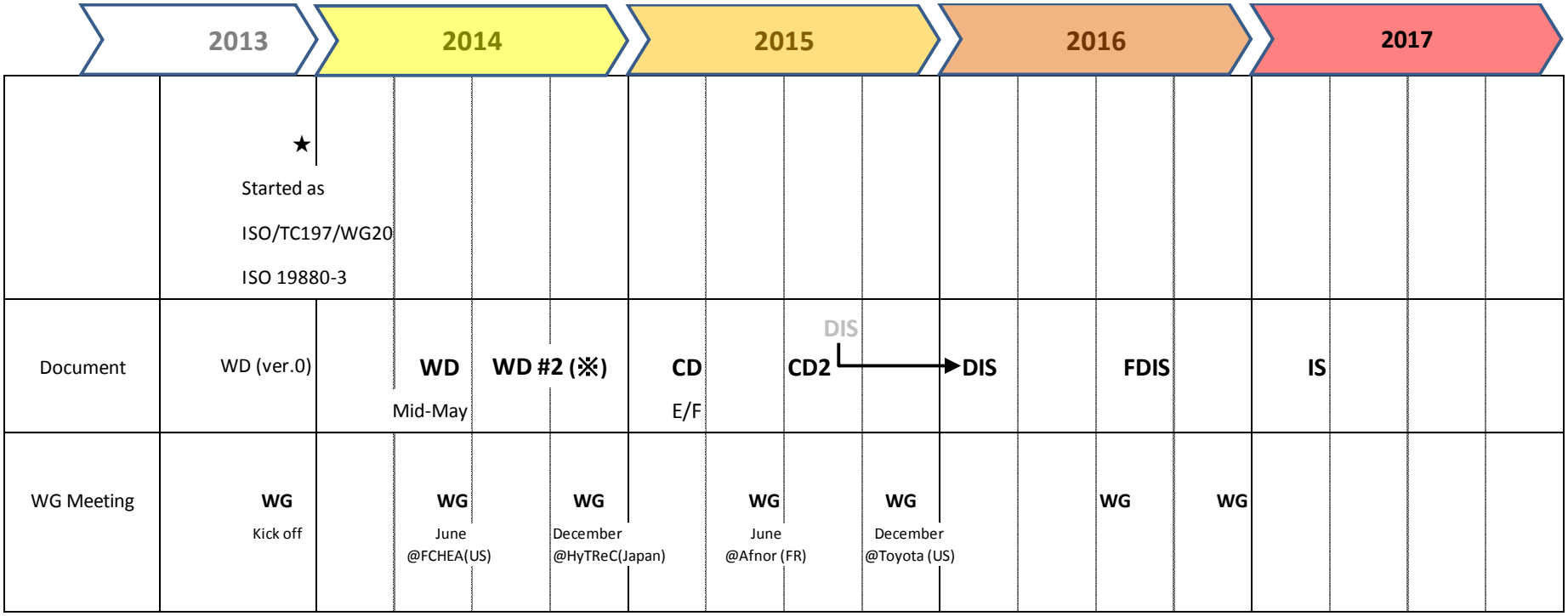
Comments (from U.S.)

Not exclusively 35 or 70MPa fuelings.

Change scope

This ISO 19880-3 provides the requirements and test methods for the safety performance of high pressure gas valves that are used in gaseous hydrogen stations **up to the H70 designation.**

Schedule of WG20 (Valves)
IS 19880-3



Change the timeline from 36 months to 48 months.