

# On-Board SCR test using middle speed engine

JAPAN

## On-board SCR Ship

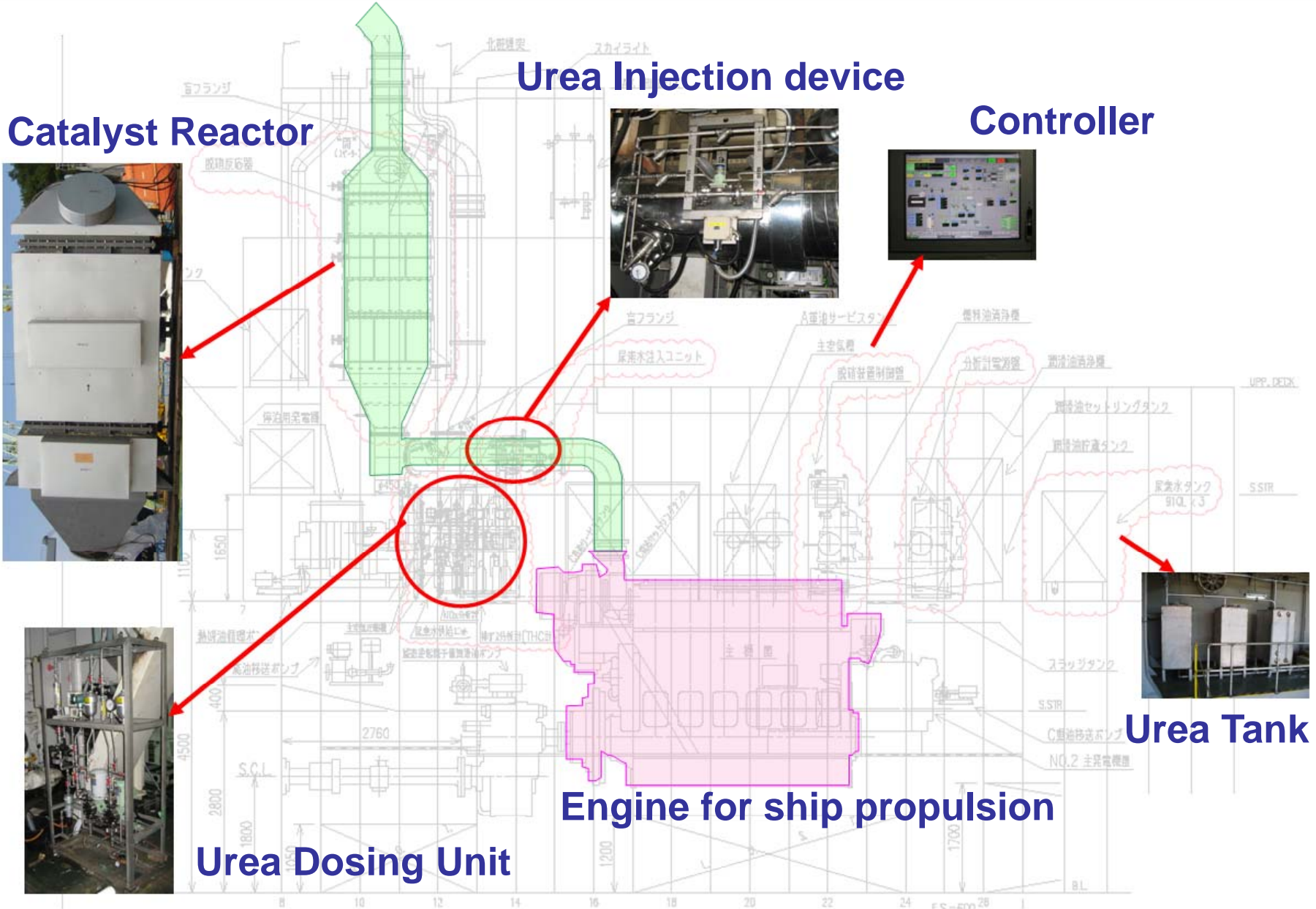
Owner : Mihara Steamship Co.,Ltd  
Operator : Nippon Steel Logistics Co.,Ltd.  
Shipyard : Sanwa Dock Co.,Ltd.

- Engine Type :6M34AT
- Engine Power :1491kW
- Engine Speed :300min<sup>-1</sup>
- Length (m) :86.25
- Width (m) :13.00
- Depth (m) :7.8
- G/T :748

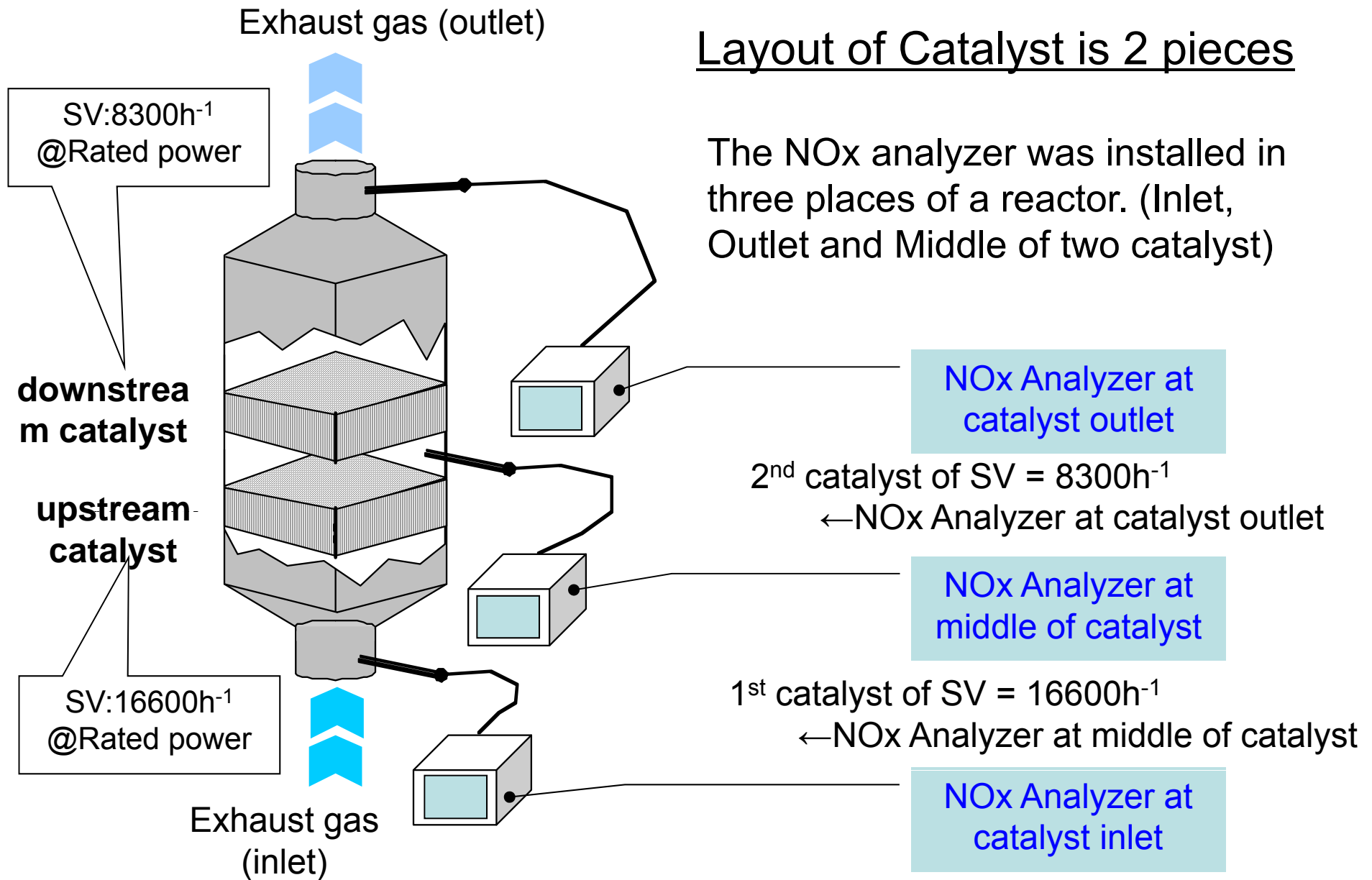


**The coaster which carries cargo**

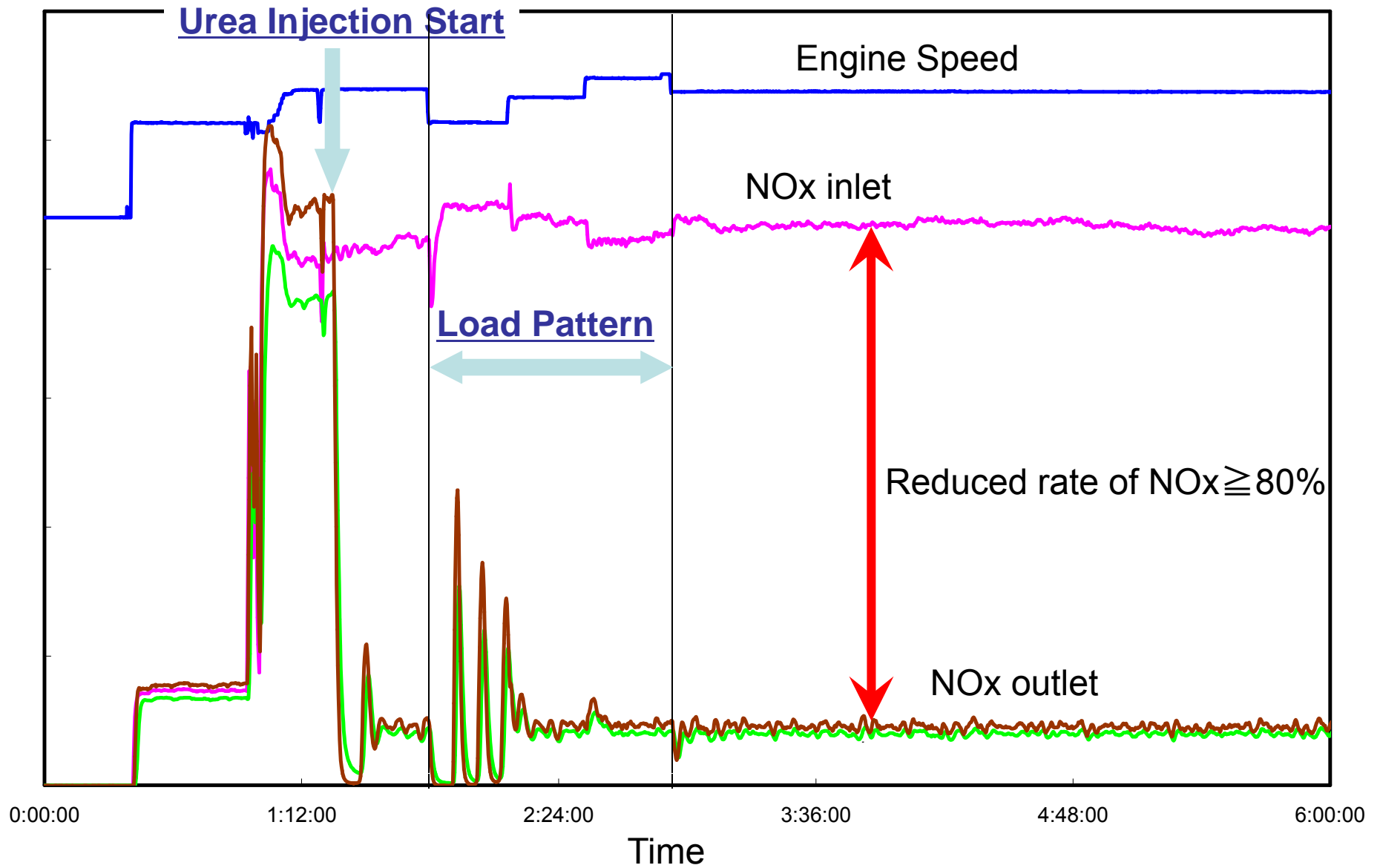
# Layout of on-board SCR system



# Layout of Catalyst and NOx Measuring point



# Test Results

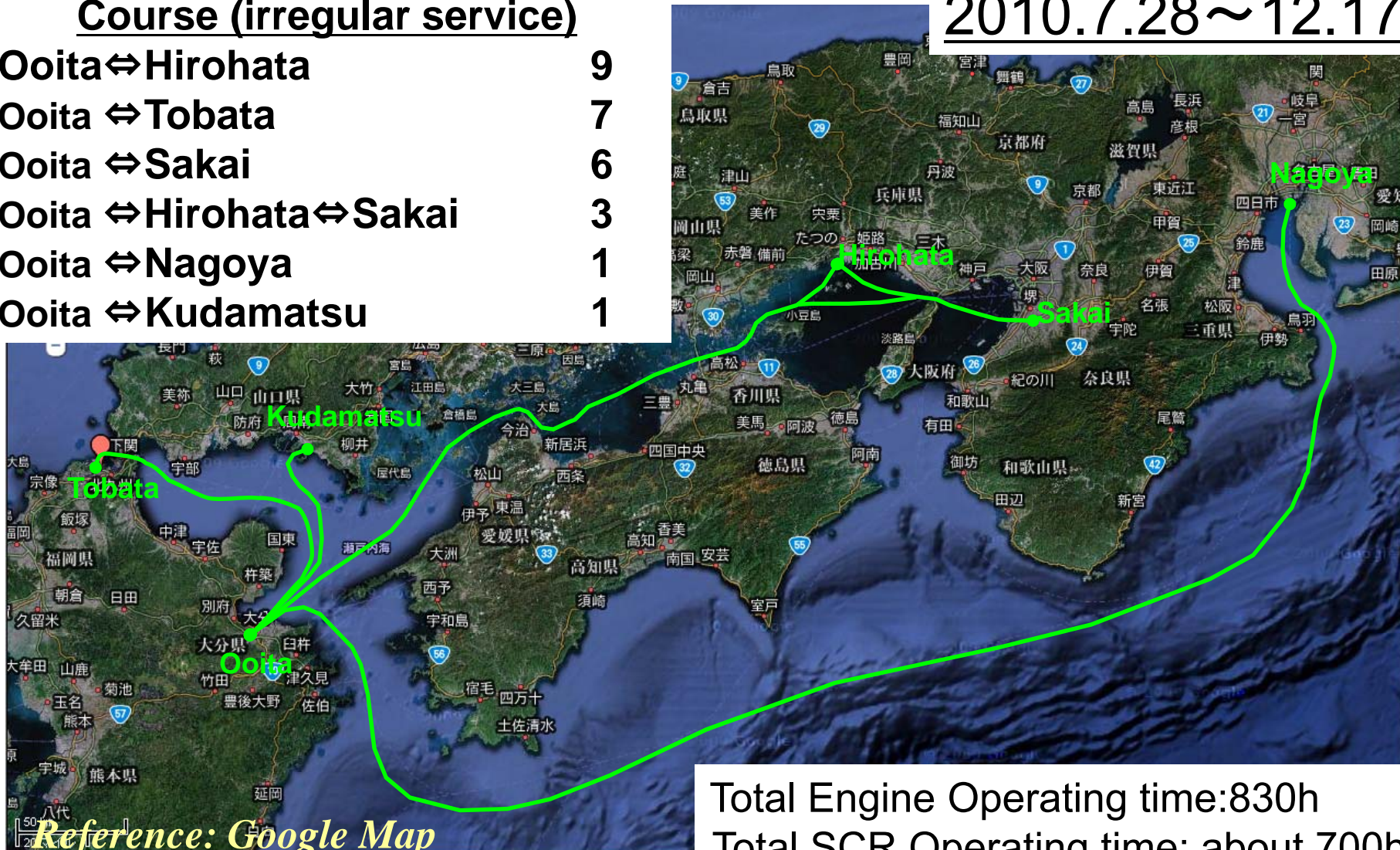


# Service course and Operation time

## Course (irregular service)

Ooita ↔ Hirohata	9
Ooita ↔ Tobata	7
Ooita ↔ Sakai	6
Ooita ↔ Hirohata ↔ Sakai	3
Ooita ↔ Nagoya	1
Ooita ↔ Kudamatsu	1

2010.7.28~12.17

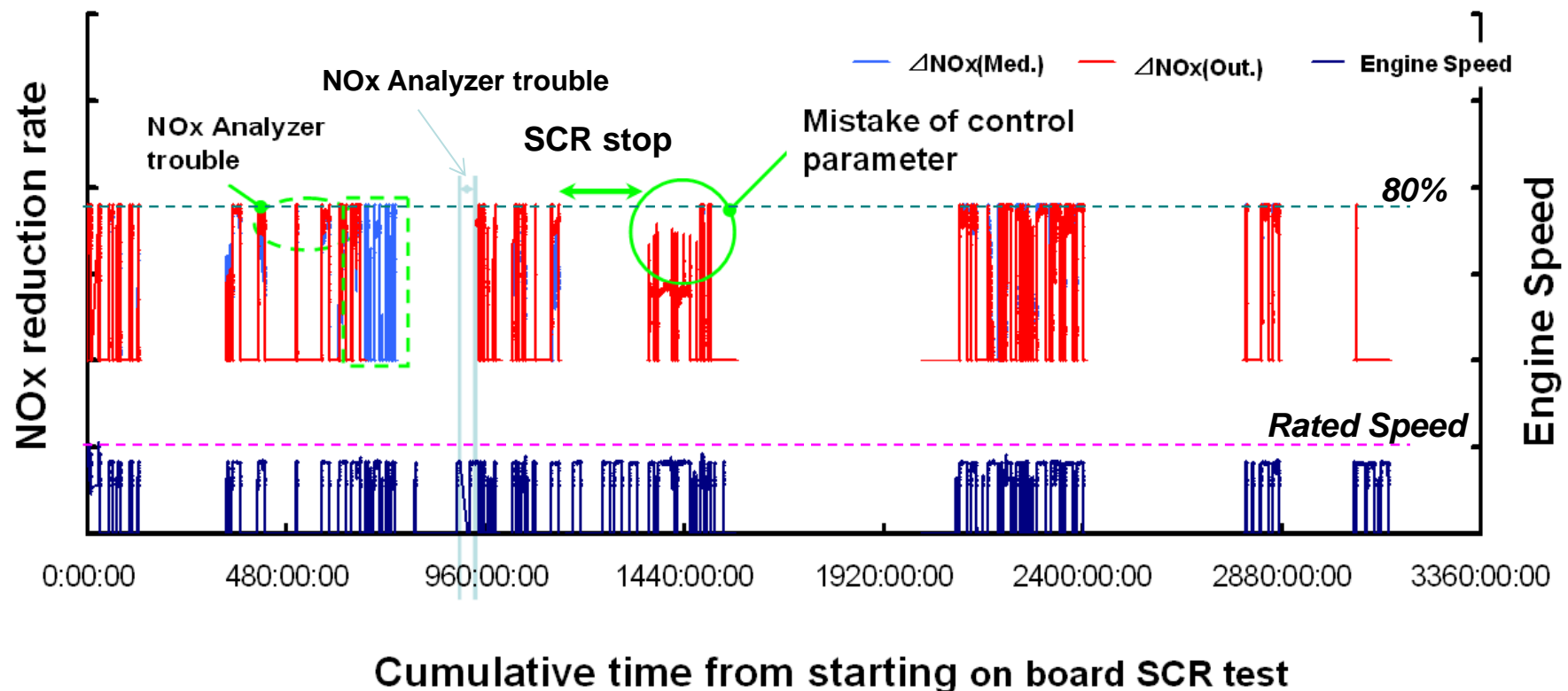


# History of operation on-board SCR test

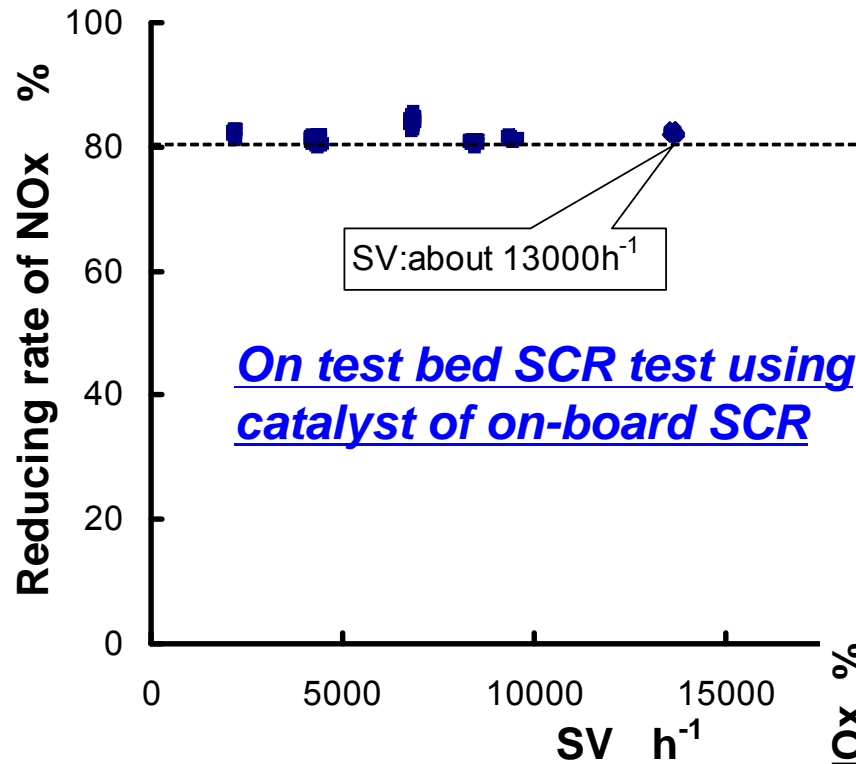
Period of Test :2010.7.28~12.17

Total Engine Operating time : 830h  
Total SCR Operating time: about 700h

- It has checked operating normally a SCR system and reducing NOx by 80%



# Evaluation of SV



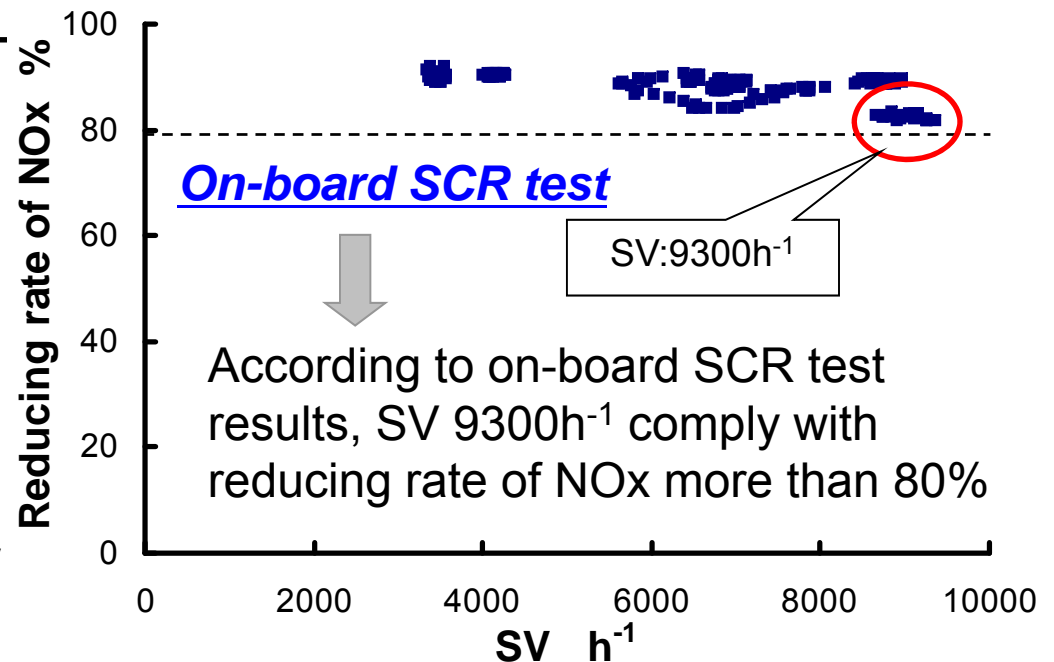
## On test bed SCR test

1<sup>st</sup> Catalyst of SV:20000h<sup>-1</sup>@Rated power  
2<sup>nd</sup> Catalyst of SV:10000h<sup>-1</sup>@Rated power

According to test bed SCR test results, SV 13000h<sup>-1</sup> comply with reducing rate of NOx more than 80%

## On-board SCR test

1<sup>st</sup> Catalyst of SV:16600h<sup>-1</sup>@Rated power  
2<sup>nd</sup> Catalyst of SV:8300h<sup>-1</sup>@Rated power



According to on-board SCR test results, SV 9300h<sup>-1</sup> comply with reducing rate of NOx more than 80%