



R/V *Shinseimaru* Cruise Report
KS-22-J01
Leg.1

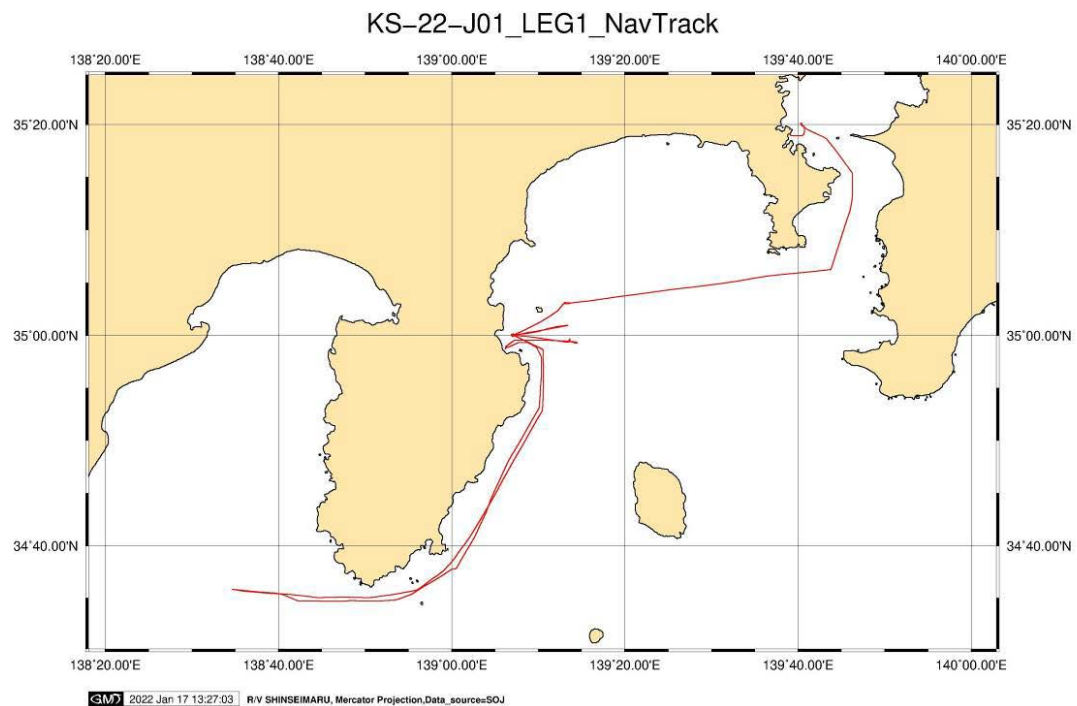
Sea Trial of ROV *Hyper Dolphin*

Research area:
Suruga-bay, Sagami-bay
Jan.13,2022-Jan.17, 2022

Japan Agency for Marine-Earth Science and Technology
(JAMSTEC)

1. Cruise Information

- Cruise ID: KS-22-J01 Leg.1
- Name of vessel: R/V *Shinseimaru*
- Title of cruise: Sea trial of ROV *Hyper-Dolphin*
- Chief Scientist: Yoshinobu Nambu
- Cruise period: January 13th, 2022 - January 17th, 2022
- Ports of departure/arrival: JAMSTEC Headquarter, Yokosuka/Ito (Shizuoka)
- Research area:
 - Sagami-bay
35° 00'N, 139° 13' E (Off Hatsushima)
 - Suruga-bay
[35° 04'N, 138° 38'E], [35° 04'N, 138° 44'E]
[34° 35'N, 138° 41'E], [34° 35'N, 138° 31'E]
- Research map



2. Research Proposal and Science Party

- Title of proposal
 - Sea trial of ROV *Hyper-Dolphin* (Leg.1)
- Representative of the science party [Affiliation]
NAMBU YOSHINOBU [JAMSTEC]
- Science party (*on shore)
 - Leg.1
NAMBU YOSHINOBU [JAMSTEC]
TORIGOE MITSURU [JAMSTEC]
NUNOURA TAKURO* [JAMSTEC]
SUMIDA TOMOMI* [JAMSTEC]
MIYAZAKI MASAYUKI [JAMSTEC]
KOBAYASHI KANAE [JAMSTEC]
HUKUYAMA YUTO [JAMSTEC]

- SHINSEIMARU Crew

Captain	NAKAMURA YOSHIYUKI
Chief Officer	SHISHIKURA TAKAAKI
2nd Officer	ITO YUKI
3rd Officer	KUSUMI KEISUKE
Chief Engineer	HASHIDE SHUICHI
1st Engineer	IKUTA SHINICHI
2nd Engineer	IKEGUCHI KENTA
3rd Engineer	TOMIYAMA YUSUKE
Chief Electronics Op.	INOUE YOICHI
2nd Electronics Op.	MATSUI RYOSUKE
Boat Swain	OHATA MASANORI
Able Seaman	FUJII TATSUO
Able Seaman	OKADA MASASHIGE
Able Seaman	KAWAMURA KOSEI
Able Seaman	UENO SHINYA
Sailor	MIURA TAKUMI
Sailor	ITO SHIN
No.1 Oiler	MORI JUNJI
Oiler	MIYAZAKI KATSUYUKI
Oiler	SUZUKI RYOTA
Assistant Oiler	ISHIDA MASAKAZU
Assistant Oiler	WAKUGAWA YUTA
Chief Steward	MURAKAMI TORU
Steward	NOJIRI TAKEHIRO
Steward	TAKAKU NORIO

- Hyper-Dolphin Operation Team

Operation Manager	KIDO TEPPEI
2nd ROV Operator	SAKAKIBARA YUDAI
2nd ROV Operator	TAYAMA YUDAI
2nd ROV Operator	YAMAGUCHI TAIKEN
3rd ROV Operator	ASANO WATARU
3rd ROV Operator	KOGUMA ATSUSHI

3. Research/Development Activities

- ROV *Hyper-Dolphin* Cable free fall

Perform a free fall on the umbilical cable # 6, to be press-fit the rust preventive and measure the rotation characteristics.

A free fall was performed on the umbilical cable # 6 for 1 day, and it was confirmed that there was no abnormality in the appearance of the cable and the electrical and optical characteristics. The rotation characteristics at a cable length of 2,000m were also obtained.



Fig.3.1. Cable free fall

- Sea trial of ROV *Hyper-Dolphin*

Annual sea trial of Hyper-Dolphin was conducted at water depths up to 1,200m to confirm the integrity of the equipment and system after land maintenance. Operation training using maneuvers and manipulators was also conducted. Note that sea trial at a depth of 3,600m could not be performed due to rough weather.



Fig.3.2. ROV *Hyper-Dolphin* (Dive#2146)

Dive #2145, Sea trial and additional work was performed at the Suruga-bay (WD = 1,200m). Operation tests of each device were performed. Dive #2146, Sea trial and additional work was performed at the Suruga-bay (WD = 850m). During dive#2145 and 2146, Manipulator operation, camera photography, vehicle operation training and acoustic positioning system test were conducted with monitoring acoustic data.

- additional work: Sediment sampling for Deep-Sea Bioresources Repository Project

Deep-Sea Bioresources Repository Project provides microbiological and environmental genetic resources such as microbial strains, deep-sea sediments for isolation of microbes and for environmental DNA, and environmental DNA sequences, to industry and academy for industrial purposes. During this cruise, Deep-Sea Bioresources Repository Project takes deep-sea sediment samples for the resources and samples for environmental parameters associated with them such as pore-water geochemistry, sediment organic geochemistry and microbial diversity.

4. Cruise Log

Date	Local Time	Description
2022/1/13 Thu.	08:00	Scientists party onboard a vessel
	09:00	Departed from JAMSTEC Headquarter, Yokosuka
	10:10	Onboard lecture
2022/1/14 Fri.	09:20	Transited to Suruga-bay
2022/1/15 Sat.	07:15	Arrived at Suruga-bay
	08:24	Started to pay out the cable of #6 winch for free fall #1
	10:09	Hold with a cable length of 2,000m for 20 min.
	10:29	Started to wind up the cable
	11:29	Recovered cable
	11:45	Transited to Sagami-bay
2022/1/16 Sun.	08:00	Arrived at Sagami-bay
	08:23	Deployed XBT
	14:03	Launched HPD, Dive #2145
	14:49	Landed sea bottom (D = 1,198m) Conducted function test
	15:42	Left sea bottom (D = 1,186m)
	16:38	Recovered HPD
2022/1/17 Mon.	08:13	Launched HPD, Dive #2146
	09:04	Landed sea bottom (D = 905m) Conducted function test
	10:37	Left sea bottom (D = 851m)
	11:20	Recovered HPD
		Arrived at Ito-port

5. Notice on Using

This cruise report is a preliminary documentation as of the end of cruise.
This report is not necessarily corrected even if there is any inaccurate description (i.e. taxonomic classifications). This report is subject to be revised without notice. Some data on this report may be raw or unprocessed. If you are going to use or refer the data on this report, it is recommended to ask the Chief Scientist for latest status.
Users of information on this report are requested to submit Publication Report to JAMSTEC.

<http://www.godac.jamstec.go.jp/darwin/explain/1/e#report>
E-mail: submit-rv-cruise@jamstec.go.jp