

ORV SAGAR KANYA

CRUISE REPORT

SK 327

Submitted to
NATIONAL CENTRE FOR ANTARCTIC & OCEAN RESEARCH,
HEAD LAND SADA, MORMUGAO, GOA,
As per ORV Sagar Kanya Annual Maintenance Contract
With
Ministry of Earth Science, New Delhi

By

NORINCO PRIVATE LIMITED
D3.19, Sancoale Industrial Estate
Zuari Nagar
Goa - 403 726

Phone: +91 832 2555 837
Fax: +91 832 2555 420
Email: goa@norinco.co.in
Web: www.norinco.co.in

Vessel : ORV. Sagar Kanya.
Cruise No : SK 327.
Chief Scientist : Mr. Dinesh K
Objective : INCOIS & NIOT Mooring
Operations
Institution : INCOIS, NIOT
Embarkation : Chennai, Tamilnadu.
Disembarkation : Port Blair, Andaman
Period : 13.02.2016 to 14.03.2016.
Participants : G.Mahadevan
P. Madhan kumar
Parshuram Madar
M. Ramesh
R. Prakash

A: Chemical / Analytical Instruments:

A 02	Oxygen Titration Unit	Maintenance Schedule: Date & Service: 14.02.2016: MS 14.03.2016: QS
Service carried out and Remarks: 14.02.2016: Monthly service carried out as per the schedule. The equipments are operational. 14.03.2016: Quarterly service carried out as per the schedule. The equipments are operational.		

A 04	Water Purifying System	Maintenance Schedule: Date & Service: 24.02.2016 : QS
Service carried out and Remarks: 24.02.2016: Quarterly service carried out as per the schedule and the equipment is operational.		

A 06	pH Meter	Maintenance Schedule: Date & Service: 13.02.2016} 27.02.2016} 06.03.2016} 13.03.2016}: WS 20.02.2016}: MS
Service carried out and Remarks: 13.02.2016} 27.02.2016} 06.03.2016} 13.03.2016}: Weekly service carried out on these days as per the schedule. 20.02.2016}: Monthly service carried out as per the schedule and the equipment is operational.		

A 08.	UV Chamber, UV Lamp	Maintenance Schedule: Date & Service: 25.02.2016: MS
Service carried out and Remarks: 25.02.2016: Monthly service carried out as per the schedule and the equipment is operational.		

B: Geological / Geological Instruments:

B 01.	Gravity Corer	Maintenance Schedule: Date & Service: 06.03.2016: MS
Service carried out and Remarks: 06.03.2016: Monthly service carried out as per the schedule and the equipment is operational.		

B 02.	Hydraulic Piston Corer	Maintenance Schedule: Date & Service: 08.03.2016: QS
Service carried out and Remarks: 08.03.2016: Quarterly service carried out as per the schedule and the equipment is operational.		
B 03.	Rock Saw Unit	Maintenance Schedule: Date & Service: 04.03.2016: QS
Service carried out and Remarks: 04.03.2016: Quarterly service carried out as per the schedule and the unit is operational.		
B 04.	Liner Saw Unit	Maintenance Schedule: Date & Service: 04.03.2016: QS
Service carried out and Remarks: 04.03.2016: Quarterly service carried out as per the schedule and the unit is operational.		
B 05.	Rock Mill	Maintenance Schedule: Date & Service: 10.03.2016: MS
Service carried out and Remarks: 10.03.2016: Monthly service carried out as per the schedule and the equipment is operational.		
B 06.	Bottom Grab {Small}	Maintenance Schedule: Date & Service: 11.03.2016: QS.
Service carried out and Remarks: 11.03.2016: Quarterly service carried out as per the schedule and the equipment is operational.		
B 07.	Bottom Grab {Large}	Maintenance Schedule: Date & Service: 11.03.2016: QS.
Service carried out and Remarks: 11.03.2016: Quarterly service carried out as per the schedule and the equipment is operational.		
B 08	Pipe Dredge	Maintenance Schedule: Date & Service: 12.03.2016 : QS
Service carried out and Remarks: 12.03.2016: Quarterly service carried out as per the schedule. The equipment is operational.		
B 09	Gravity Square Box Corer	Maintenance Schedule: Date & Service: 13.03.2016 : QS
Service carried out and Remarks: 13.03.2016: Quarterly service carried out as per the schedule. The equipment is operational.		

B 10.	Side Scan Sonar + Tow Fish	Maintenance Schedule: Date & Service: 15.02.2016: MS.
Service carried out and Remarks: 15.02.2016: Monthly service carried out as per the schedule and the equipment is operational.		
B 13.	Deep Sea Echo sounder + Repeaters	Maintenance Schedule: Date & Service:07.03.2016 : QS
Service carried out and Remarks: Deep sea echosounder was used during the cruise and data was recorded. On completion of the cruise the recorded data was copied on DVD. 07.03.2016: Quarterly service carried out as per the schedule and the equipment is operational.		
B 14.	Shallow Water Echo sounder + Repeaters	Maintenance Schedule: Date & Service: 07.03.2016: QS
Service carried out and Remarks: 07.03.2016: Quarterly service carried out as per the schedule and the equipment is partially operational.		
B 15	Multi Beam Echo Sounder	Maintenance Schedule: Date & Service: 16.02.2016: QS
Service carried out and Remark: The system was used for surveying the NIOT BUOY deployment and operational status of the equipment is satisfactory. 16.02.2016: Quarterly service carried out as per the schedule and the equipment is operational.		
B 16.	SBP	Maintenance Schedule: Date & Service: 09.03.2016: QS
Service carried out and Remarks: The system was switched ON throughout the cruise and data was recorded. On completion of the cruise, data was copied on DVD. 09.03.2016: Quarterly service carried out as per the schedule and the equipment is operational.		
B 17	Spade Corer	Maintenance Schedule: Date & Service: 17.02.2016: MS
Service carried out and Remark: 17.02.2016: Monthly service carried out as per the schedule. The equipment is operational.		
B 18.	Chain Bag Dredge	Maintenance Schedule: Date & Service: 18.02.2016: MS
Service carried out and Remarks: 18.02.2016: Monthly service carried out as per the schedule and the equipment is operational.		

B 19.	Core Sub-Sampling Station	Maintenance Schedule: Date & Service: 18.02.2016: QS
Service carried out and Remarks: 18.02.2016: Quarterly service carried out as per the schedule and the unit is operational.		

B 21.	Tension Meter for Winch	Maintenance Schedule: Date & Service: 20.02.2016: MS
Service carried out and Remarks: 20.02.2016: Monthly service carried out as per the schedule and the equipment is operational.		

B 22.	Sieve Shaker	Maintenance Schedule: Date & Service: 21.02.2016 : MS
Service carried out and Remarks: 21.02.2016: Monthly service carried out as per the schedule and the equipment is operational.		

C: Oceanography/Metrology/Biology Equipment:

C 01.	Automatic Plankton Sampler	Maintenance Schedule: Date & Service: 22.02.2016 : MS
Service carried out and Remarks: 22.02.2016: Monthly service carried out as per the schedule and the equipment is operational.		

C 03.	XBT System	Maintenance Schedule: Date & Service: 22.02.2016: QS
Service carried out and Remarks: 22.02.2016: Quarterly service carried out as per the schedule and the equipment is operational.		

C 04	CTD Profiling System (IDRONAUT)	Maintenance Schedule: Date & Service: 14.02.2016} 14.03.2016}: MS
Service carried out and Remarks: 14.02.2016} 14.03.2016}: Monthly service carried out as per the maintenance schedule. The equipment is operational.		

C 05.	Niskin Sampler 1.7Ltrs	Maintenance Schedule: Date & Service: Operation
Service carried out and Remarks: During CTD operation 7 Nos of 1.7 Ltrs Niskin sampler bottles were used for collecting water samples at different CTD locations. After water sampling, the bottles were cleaned with fresh water and secured.		

C 11.	Bucket Thermometers	Maintenance Schedule: Date & Service: 18.02.2016: MS
Service carried out and Remarks: 18.02.2016: Monthly service carried out as per the schedule and both units are operational.		

C 13.	Barometer	Maintenance Schedule: Date & Service: 19.02.2016: MS
Service carried out and Remarks: 19.02.2016: Monthly service carried out as per the schedule and the unit is operational.		

C 17.	Thermosalinograph	Maintenance Schedule: Date& Service: 18.02.2016: MS
Service carried out and Remarks: Thermosalinograph was used during entire period of the cruise and data was recorded. The recorded data was processed and copied on DVD. At the end of the cruise the sensors were flushed with fresh water. 18.02.2016: Monthly service carried out as per the schedule and equipment is operational.		

C 20.	Rotary Shaker	Maintenance Schedule: Date& Service: 22.02.2016: MS
Service carried out and Remarks: 22.02.2016: Monthly service carried out as per the schedule and the equipment is operational.		

D: Auxiliary / General Equipment:
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D 01	GPS + Power Supply	Maintenance Schedule: Date & Service: Operation.
Service carried out and Remarks: GPS was used throughout the cruise and navigational data was made available to all under way equipment (DSES, CTD, TSG, and SBP). The equipment is operational.		

D 02	CCTV	Maintenance Schedule: Date & Service: 06.03.2016: MS
Service carried out and Remarks: CCTV was used throughout the cruise for monitor various activities onboard. 06.03.2016: Monthly service carried out as per the schedule and the equipment is operational.		

D 03.	Refrigerators	Maintenance Schedule: Date & Service: 13.02.2016} 27.02.2016} 06.03.2016} 13.03.2016}: WS 20.02.2016}: MS
Service carried out and Remarks: 13.02.2016} 27.02.2016} 06.03.2016} 13.03.2016}: Weekly service carried out on these days as per the schedule. 20.02.2016: Monthly service carried out as per the schedule. Except Wet Lab STBD side all other refrigerators are operational.		

D 05.	Deep Freezer	Maintenance Schedule: Date & Service: 23.02.2016: QS
Service carried out and Remarks: 23.02.2016: Quarterly service carried out as per the schedule and both the units are operational.		

D 06	Meter Wheel Unit	Maintenance Schedule: Date & Service: 17.02.2016: MS
Service carried out and Remark: Forward Pulley was used during CTD operation and the performance was satisfactory 17.02.2016: Monthly service carried out as per the schedule and the equipment is operational. Except cable payout unit, both pulleys are operational.		

D 07	Personal Computer / Server & Peripherals (12 CPUs, 15 monitors)	Maintenance Schedule: Date & Service: 28.02.2016: MS	
Service carried out and Remarks: The following computers are available onboard and their status are as follows:			
Sl. No	PC	Loc: / Dedicated to	Status / Remarks
01	Computer: 01 Make: Lenovo Think Centre. M/N: 8811-FRA. S/N: L9AM500. Monitor: 01 Lenovo Think Vision	Chief scientist Cabin	Operational
02	Computer: 02 Make: Lenovo Think Centre P/N: MT-M 8811-FR8 S/N: L9AM507 Monitor: 02	Met Lab / AWS	Operational

	Make: HPLE1851W. P/N: NK033A. S/N: CNC102QH7B		
03	Computer: 03 Make: HP Compaq 8100. P/N: XT767PA#ACJ. S/N: INA109VJRJ. Monitor: 03 Make: HP LE1851w. P/N: NK033A. S/N: CNC102QH85.	Met Lab / General Purpose	Operational
04	Computer: 04 Make: HP Compaq 8100 P/N: XT767PA#ACJ S/N: INA109VJYS Monitor: 04 Make: HP LE1851w. P/N: NK033A. S/N: CNC102QHX1.	Dry-Lab Port / Thermosalinograph	Operational
05	Computer: 05 Make: HP Compaq 8100 P/N: XT767PA#ACJ S/N: INA109VJRR Monitor: 05 Make : Acer Model : V193HQL Version : V193HQL H6 P/N : VM.XV3SS.HO1 S/N : MMLKESS0063010C9938507	Dry-Lab Port / CTD	Operational
06	Computer: 06 Make: Lenovo Think Centre. M/N: 8811-FRA. S/N: L9AM534. Monitor: 06 Make :AOC Model No. TFT185W80PS S/N:AOCWSM5NA1802098	Dry-Lab Port/ ADCP	Operational
07	Computer: 07 Make: HP Compaq 8100. P/N: XT 767PA#ACJ S/N: INA109VJWD. Monitor: 07 Make: HP LE1851w. P/N: NK033A. S/N: CNC102QHM3.	Dry-Lab Port / Magnetometer	Operational
08	Computer: 08 Make: Lenovo Think Centre. M/N: 8811-FRA. S/N: L9AM499.	Dry Lab Stbd / Echo sounder	Non-Operational

	<p>Monitor: 08 Make: HP LE1851w. P/N: NK033A. S/N: CNC102QH7K.</p>		
09	<p>Computer: 09 Make: HP Compaq 8100. P/N: XT767PA#ACJ. S/N: INA109VJKN. Monitor: 09 Make: HP LE1851w. P/N: NK033A. S/N: CNC102QFYF.</p>	Conference room	Operational
10	<p>Computer: 10 Make: HP Compaq 8100. P/N: XT767PA#ACJ. S/N: INA109VJYM. Monitor: 10 AOC. 18.5' Wide LED P/N. e950Sw Model No.185LM00013 S/N: AOCAR96C3052436</p>	Photo Lab	Operational
11	<p>Computer: 11 Make: Lenovo Think Centre M/N: 8811-FRA. S/N: L9AM498 Monitor: 11 Make: Lenovo Model: 9227-AD1 Serial Number: V1A2955</p>	Photo Lab	Operational
12	<p>Computer: 12 Make: Zebronics. Model: Elegance.</p>	Photo Lab	Operational
13	<p>Computer: 13 Make: XTECH.</p>	Photo Lab	Operational
Monitors			
14	<p>Monitor:12 Make: Lenovo Think Vision Model: 9227 AD1. S/N: V1A2976.</p>	Wheel House	Operational. This is connected with wheel house deep sea echo sounder repeater.
15	<p>Monitor:13 Make : AOC S/N: AOCWSM5NA1801905</p>	Dry Lab Stbd / SWES	Operational. This is connected with SWES
<p>Except One Lenovo system assigned to echosounder all other systems are operational.</p> <p>28.02.2016: Monthly service carried out as per the schedule.</p>			

D 08	LAN	Maintenance Schedule: Date & Service: 28.02.2016: MS
Service carried out and Remarks: 28.02.2016: Monthly service carried out as per the schedule and the LAN is operational.		

D 09	Printers	Maintenance Schedule: Date & Service: 28.02.2016: MS
Service carried out and Remarks: The following printers are available onboard and their status are as follows:		

No	Make of the printer	Location	Status / Remarks
1	HP LaserJet P 2015dn	CS Cabin	Used, Operational
2	HP LaserJet P 1007	Met Lab	Used ,Operational
3	HP LaserJet P 1007	Photo Lab	Operational
4	HP LaserJet P 1007	Photo Lab	Operational
5	HP LaserJet CP 1525n	Conference Room	Used ,Operational
6	HP LaserJet P 2015dn	CTD Lab	Used, Operational
7	HP LaserJet 1150	Photo Lab	Operational
8	HP LaserJet 1150	Tape Store	Operational, Cover broken
9	HP LaserJet 1150	Tape Store	Operational

28.02.2016: Monthly service carried out as per the schedule and the equipments are operational.

D 10.	External CD Writer	Maintenance Schedule: Date & Service: 01.03.2016: MS
Service carried out and Remarks: 01.03.2016: Monthly service carried out as per the schedule and the external CD Writer is operational.		

D 11.	Scanner	Maintenance Schedule: Date & Service: 01.03.2016: MS
Service carried out and Remarks: 01.03.2016: Monthly service carried out as per the schedule and the Scanner is operational.		

D 13.	Autoclave	Maintenance Schedule: Date & Service: 21.02.2016 : MS
Service carried out and Remarks: 21.02.2016: Monthly service carried out as per the schedule and the equipment is operational.		

D 15.	Overhead Projector	Maintenance Schedule: Date & Service: 26.02.2016: QS
Service carried out and Remarks: 26.02.2016: Quarterly service carried out as per the schedule and the equipment is operational.		

D 16.	Slide Projector	Maintenance Schedule: Date & Service: 26.02.2016: QS
Service carried out and Remarks: 26.02.2016: Quarterly service carried out as per the schedule and the equipment is operational.		

D 17.	LCD Projector	Maintenance Schedule: Date & Service: 26.02.2016: QS
Service carried out and Remarks: 26.02.2016: Quarterly service carried out as per the schedule and the equipment is operational.		

D 18.	Dynamic Positioning System & All sub - Units	Maintenance Schedule: Date & Service: 27.02.2016: MS
Service carried out and Remarks :		
<p>The DGPS subscription (Sl.No: 272286) expired on 29/02/2016. It was renewed on 03.03.2016. The DGPS subscription validity expires on 30/03/2016.</p> <p>The DP was used during the CTD and Mooring Operations.</p> <p>Though the system was operational, the following sub unit is non-functional and need replacement:</p> <ol style="list-style-type: none"> 1. Portside Wind sensor. <p>27.02.2016: Monthly service carried out as per the schedule and the equipment is operational</p>		

D 19.	HI-PAP	Maintenance Schedule: Date & Service: 27.02.2016: MS
Service carried out and Remarks : 27.02.2016: Monthly service carried out as per the maintenance schedule. The equipment is operational.		

D20.	Deck Crane	Maintenance Schedule: Date & Service:
Service carried out and Remarks: Crane was used for NIOT & INCOIS mooring operations. The deck crane is operational.		

ADDITIONAL WORKS CARRIED OUT

	SBE 9/11plus CTD. (Deck unit SN: 11P61163-0862 / Underwater unit SN: 09P61163-1019).	Maintenance Schedule: Date & Service: operation
Service carried out and Remarks : During the cruise, CTD was operated at 11 stations for NIOT & INCOIS. Water samples have been collected for INCOIS group. After every operation underwater unit was washed with fresh water and secured and data has been collected. On 11.03.2016, while inspecting the CTD before lowering, found		

pressure sensor port external capillary tube & fluorescence sensor protection cap were missing. This has been informed to chief scientist, ship board assistant & chief officer.
Pressure sensor port external capillary tube has been replaced from sagar kanya spare and equipment is working satisfactorily.

	CTD Winches (FWD & AFT)	Maintenance Schedule: Date & Service: operation
Service carried out and Remarks : Forward CTD winch was used for CTD & BPR deployment operations. Both the winches are operational.		

	Autosal	Maintenance Schedule: Date & Service: operation
Service carried out and Remarks : On 08.03.2016 while checking the Autosal, Found that bath temperature is not maintained constant. Further inspection; found that impeller motor belt has worn out. This o-ring belt has been replaced from NCAOR spares and equipment is working satisfactorily. The equipment is operated for calculating the salinity of the sea water samples at various depths collected during the cruise as per the chief scientist requirement.		

For Norinco Private Limited

Chief Scientist

G.Mahadevan
Service Engineer

Mr. Dinesh K
INCOIS Hyderabad