

LRIT TESTING PROTOCOL – 00001/02/23

Name of ship Название судна	Yamal / Ямал
IMO number Номер IMO	9077549
Flag of ship Флаг судна	Russian Federation / Российская Федерация
Type of ship Тип судна	Nuclear Icebreaker / Атомный ледокол
Model Модель	«Galileosky Base Block Iridium marine kit» / «Морской комплект Galileosky Base Block Iridium»
ISN of Inmarsat C Номер ISN терминала Инмарсат С	Terminal SN: T0004 Control&diagnostic unit SN: B0004
IMN (address) of Inmarsat C Номер IMN (адрес) терминала Инмарсат С	300234069402670
Maker Изготовитель	WIDAR LLC. (Russia) / ООО «ВИДАР» (Россия)
The version of firmware of Inmarsat-C Версия ПО терминала Инмарсат С	FW: 2.74
Built-in GPS-receiver presence (Yes/No) Наличие встроенного GPS-приемника (Да/Нет)	Yes / Да
Testing time period Период проведения тестирования	[2023-FEB-13] - [2023-FEB-15]

Declaration:

Testing was done by Manufacturer of the equipment according to MSC.1/Circ.1307 «GUIDANCE ON THE SURVEY AND CERTIFICATION OF COMPLIANCE OF SHIPS WITH THE REQUIREMENT TO TRANSMIT LRIT INFORMATION»

The Manufacturer has no any authorization/recognition as «LRIT testing provider» from any Flag maritime administration but has relevant experience, knowledge of regulatory and technical documents on LRIT system and technical capabilities of LRIT testing for shipborne equipment.

Декларация:

Тестирование было выполнено производителем оборудования согласно MSC.1/Circ.1307 «Руководство по проверке и сертификации судов на соответствие требованиям системы ОСДР»

Производитель не имеет авторизации/признания в качестве «Прикладного провайдера по тестированию оборудования ОСДР» ни от одной морской администрации, но имеет соответствующий опыт, знание регулирующих и технических документов по системе ОСДР и технические возможности для выполнения тестирования для судового оборудования ОСДР.

ONE TIME POLL 1
ОДНОКРАТНЫЙ ОПРОС 1**MT-message**

Date of request, UTC: 2023-02-13 19:25:19.028
Command: ?status
Gateway answer: Successful, order of message in the MT message queue 1
Date of answer, UTC: 2023-02-13 19:26:01.603

MO-message

Date of message, UTC: 2023-02-13 19:26:11.000
Type: Check mailbox request
Message body: Empty message

MO-message

Date of message, UTC: 2023-02-13 19:26:23.000
Type: Answer on request
Message body: ?Dev135 Soft=27.4 Pack=834229 TmDt=19:26:11 13.02.23 Nav=0
Lat=74.517636 Lon=72.664618 Alt=28 Spd=20.0 HDOP=0.6 SatCnt=19 A=157.2
Commit=3086DA15

MO-message

Date of message, UTC: 2023-02-13 19:26:32.000
Type: Acknowledgement
Message body: Ack+

ONE TIME POLL 2
ОДНОКРАТНЫЙ ОПРОС 2**MT-message**

Date of request, UTC: 2023-02-13 19:27:59.128
Command: ?status
Gateway answer: Successful, order of message in the MT message queue 1
Date of answer, UTC: 2023-02-13 19:28:01.702

MO-message

Date of message, UTC: 2023-02-13 19:28:18.000
Type: Check mailbox request
Message body: Empty message

MO-message

Date of message, UTC: 2023-02-13 19:28:25.000
Type: Answer on request
Message body: ?Dev135 Soft=27.4 Pack=834350 TmDt=19:28:17 13.02.23 Nav=0
Lat=74.511443 Lon=72.673438 Alt=18 Spd=20.1 HDOP=0.5 SatCnt=19 A=159.4
Commit=3086DA15

MO-message

Date of message, UTC: 2023-02-13 19:28:32.000
Type: Acknowledgement
Message body: Ack+

**ONE TIME POLL 3
ОДНОКРАТНЫЙ ОПРОС 3****MT-message**

Date of request, UTC: 2023-02-13 19:29:28.412
Command: ?status
Gateway answer: Successful, order of message in the MT message queue 1
Date of answer, UTC: 2023-02-13 19:30:01.747

MO-message

Date of message, UTC: 2023-02-13 19:30:22.000
Type: Check mailbox request
Message body: Empty message

MO-message

Date of message, UTC: 2023-02-13 19:30:31.000
Type: Answer on request
Message body: ?Dev135 Soft=27.4 Pack=834470 TmDt=19:30:21 13.02.23 Nav=0
Lat=74.505706 Lon=72.682653 Alt=23 Spd=19.4 HDOP=0.5 SatCnt=19 A=155.4
Commit=3086DA15

MO-message

Date of message, UTC: 2023-02-13 19:30:42.000
Type: Acknowledgement
Message body: Ack+

**PROGRAMMING FOR POSITION REPORTING FOR 15 MINUTES INTERVAL
ПРОГРАММИРОВАНИЕ НА ПЕРЕДАЧУ ОТЧЕТОВ С 15-ТИ МИНУТНЫМ ИНТЕРВАЛОМ****MT-message**

Date of request, UTC: 2023-02-13 19:34:41.559
Command: ?sputnik 900,0,15
Gateway answer: Successful, order of message in the MT message queue 1
Date of answer, UTC: 2023-02-13 19:35:01.550

MO-message

Date of message, UTC: 2023-02-13 19:35:16.000
Type: Check mailbox request
Message body: Empty message

MO-message

Date of message, UTC: 2023-02-13 19:35:24.000
Type: Answer on request
Message body: ?SPUTNIK:Timeout=900,Mode=0,MaxBytes=15;

MO-message

Date of message, UTC: 2023-02-13 19:35:35.000
Type: Acknowledgement

POSITION REPORTS: ОТЧЕТЫ О ПОЗИЦИИ:								
No.	Latitude	Longitude	Speed, kt	Course, dg	Date of position, UTC	MOMSN	Time of session, UTC	Date of receipt, UTC
46	73,9323	72,3332	11.34	9.00	2023-02-14 07:13:24.000	26472	2023-02-14 07:13:34.000	2023-02-14 07:13:34.000
45	73,8859	72,2823	11.88	355.00	2023-02-14 06:58:11.000	26471	2023-02-14 06:58:23.000	2023-02-14 06:58:24.000
44	73,8353	72,2571	11.88	5.00	2023-02-14 06:42:56.000	26470	2023-02-14 06:43:10.000	2023-02-14 06:43:11.000
43	73,7881	72,3065	11.34	328.00	2023-02-14 06:27:45.000	26469	2023-02-14 06:27:55.000	2023-02-14 06:27:56.000
42	73,7417	72,3735	11.88	336.00	2023-02-14 06:12:38.000	26468	2023-02-14 06:12:44.000	2023-02-14 06:12:45.000
41	73,7032	72,4705	9.72	327.00	2023-02-14 05:57:18.000	26467	2023-02-14 05:57:37.000	2023-02-14 05:57:39.000
40	73,6620	72,5479	10.80	337.00	2023-02-14 05:41:47.000	26466	2023-02-14 05:41:56.000	2023-02-14 05:42:03.000
39	73,6166	72,6147	10.80	336.00	2023-02-14 05:26:13.000	26465	2023-02-14 05:26:24.000	2023-02-14 05:26:25.000
38	73,5708	72,6379	11.34	358.00	2023-02-14 05:10:46.000	26464	2023-02-14 05:11:10.000	2023-02-14 05:11:12.000
37	73,5224	72,6285	11.34	1.00	2023-02-14 04:55:18.000	26463	2023-02-14 04:55:45.000	2023-02-14 04:55:46.000
36	73,4750	72,6209	9.72	6.00	2023-02-14 04:40:04.000	26462	2023-02-14 04:40:17.000	2023-02-14 04:40:18.000
35	73,4622	72,6116	0.00	10.00	2023-02-14 04:24:57.000	26461	2023-02-14 04:25:04.000	2023-02-14 04:25:05.000
34	73,4612	72,6109	0.00	0.00	2023-02-14 04:09:48.000	26460	2023-02-14 04:09:56.000	2023-02-14 04:09:58.000
33	73,4613	72,6110	0.00	0.00	2023-02-14 03:54:26.000	26459	2023-02-14 03:54:47.000	2023-02-14 03:54:48.000
32	73,4657	72,6148	1.08	195.00	2023-02-14 03:39:18.000	26458	2023-02-14 03:39:25.000	2023-02-14 03:39:26.000
31	73,4422	72,5595	5.94	51.00	2023-02-14 03:23:55.000	26457	2023-02-14 03:24:18.000	2023-02-14 03:24:19.000
30	73,4018	72,5045	11.34	3.00	2023-02-14 03:08:36.000	26456	2023-02-14 03:08:45.000	2023-02-14 03:08:46.000
29	73,3781	72,5010	8.64	309.00	2023-02-14 02:53:23.000	26455	2023-02-14 02:53:36.000	2023-02-14 02:53:36.000
28	73,4199	72,5758	10.26	207.00	2023-02-14 02:38:08.000	26454	2023-02-14 02:38:22.000	2023-02-14 02:40:28.000
27	73,4646	72,6103	9.18	188.00	2023-02-14 02:22:46.000	26453	2023-02-14 02:23:07.000	2023-02-14 02:23:08.000
26	73,5134	72,6233	11.88	183.00	2023-02-14 02:07:36.000	26452	2023-02-14 02:07:45.000	2023-02-14 02:07:46.000
25	73,5622	72,6334	10.26	179.00	2023-02-14 01:52:24.000	26451	2023-02-14 01:52:36.000	2023-02-14 01:52:37.000

24	73,6107	72,6082	11.34	157.00	2023-02-14 01:37:12.000	26450	2023-02-14 01:37:20.000	2023-02-14 01:38:27.000
23	73,6588	72,5419	10.26	156.00	2023-02-14 01:22:06.000	26449	2023-02-14 01:22:11.000	2023-02-14 01:22:12.000
22	73,6930	72,4767	7.56	148.00	2023-02-14 01:06:57.000	26448	2023-02-14 01:07:05.000	2023-02-14 01:07:06.000
21	73,7302	72,3889	11.88	158.00	2023-02-14 00:51:49.000	26447	2023-02-14 00:51:56.000	2023-02-14 00:51:57.000
20	73,7802	72,3174	12.42	149.00	2023-02-14 00:36:37.000	26446	2023-02-14 00:36:49.000	2023-02-14 00:36:49.000
19	73,8309	72,2831	11.88	183.00	2023-02-14 00:21:29.000	26445	2023-02-14 00:21:36.000	2023-02-14 00:21:37.000
18	73,8808	72,3052	10.26	173.00	2023-02-14 00:06:19.000	26444	2023-02-14 00:06:28.000	2023-02-14 00:06:29.000
17	73,9243	72,3608	8.10	182.00	2023-02-13 23:51:05.000	26443	2023-02-13 23:51:18.000	2023-02-13 23:51:20.000
16	73,9615	72,3603	9.18	176.00	2023-02-13 23:35:56.000	26442	2023-02-13 23:36:04.000	2023-02-13 23:36:05.000
15	73,9953	72,3642	12.42	170.00	2023-02-13 23:20:44.000	26441	2023-02-13 23:20:55.000	2023-02-13 23:20:56.000
14	74,0478	72,3394	12.42	169.00	2023-02-13 23:05:33.000	26440	2023-02-13 23:05:43.000	2023-02-13 23:05:44.000
13	74,0988	72,3583	11.34	198.00	2023-02-13 22:50:18.000	26439	2023-02-13 22:50:32.000	2023-02-13 22:50:33.000
12	74,1446	72,4251	10.26	204.00	2023-02-13 22:35:05.000	26438	2023-02-13 22:35:17.000	2023-02-13 22:35:18.000
11	74,1881	72,5018	13.50	212.00	2023-02-13 22:19:54.000	26437	2023-02-13 22:20:05.000	2023-02-13 22:22:10.000
10	74,2038	72,5362	0.00	86.00	2023-02-13 22:04:47.000	26436	2023-02-13 22:04:53.000	2023-02-13 22:04:55.000
9	74,2069	72,5391	4.32	209.00	2023-02-13 21:49:34.000	26435	2023-02-13 21:49:47.000	2023-02-13 21:49:48.000
8	74,2166	72,5448	1.62	30.00	2023-02-13 21:34:28.000	26434	2023-02-13 21:34:33.000	2023-02-13 21:34:34.000
7	74,2148	72,5371	0.00	0.00	2023-02-13 21:18:50.000	26433	2023-02-13 21:19:00.000	2023-02-13 21:20:06.000
6	74,2425	72,5819	10.26	198.00	2023-02-13 21:03:42.000	26432	2023-02-13 21:03:49.000	2023-02-13 21:03:50.000
5	74,2839	72,6182	11.88	199.00	2023-02-13 20:48:31.000	26431	2023-02-13 20:48:41.000	2023-02-13 20:48:42.000
4	74,3254	72,6689	11.88	197.00	2023-02-13 20:33:11.000	26430	2023-02-13 20:33:30.000	2023-02-13 20:33:31.000
3	74,3627	72,7075	1.62	14.00	2023-02-13 20:18:03.000	26429	2023-02-13 20:18:10.000	2023-02-13 20:18:11.000
2	74,4037	72,7269	11.34	187.00	2023-02-13 20:02:47.000	26428	2023-02-13 20:03:02.000	2023-02-13 20:03:03.000

1	74,4514	72,7375	11.34	167.00	2023-02-13 19:47:40.000	26427	2023-02-13 19:47:46.000	2023-02-13 19:47:47.000
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Small operator's fault:
Stop command was sent 30 min earlier than it was required by testing schedule-12h.
Команда остановки была послана на 30 мин раньше, чем этого требовал тест - 12ч.

Result: 46 Position Reports with 15 minutes interval from 48 possible transmissions (96% result)/ Получено 46 отчетов о позиции по расписанию (каждые 15 минут) из 48 возможных передач (96% результат)

STOPPING OF POSITION REPORTING
ОСТАНОВКА ПРОГРАММЫ ПЕРЕДАЧИ ОТЧЕТОВ

MT-message
Date of request, UTC: 2023-02-14 07:13:50.799
Command: ?sputnik 0,0,15
Gateway answer: Successful, order of message in the MT message queue 1
Date of answer, UTC: 2023-02-14 07:14:02.155

MO-message
Date of message, UTC: 2023-02-14 07:14:34.000
Type: Check mailbox request
Message body: Empty message

MO-message
Date of message, UTC: 2023-02-14 07:14:44.000
Type: Answer on request
Message body: ?SPUTNIK:Timeout=0,Mode=0,MaxBytes=15;

MO-message
Date of message, UTC: 2023-02-14 07:15:28.000
Type: Acknowledgement

The position reporting was stopped/ Передача отчетов прекращена

PROGRAMMING FOR POSITION REPORTING FOR ONE HOUR INTERVAL
ПРОГРАММИРОВАНИЕ НА ЧАСОВОЙ ИНТЕРВАЛ

MT-message
Date of request, UTC: 2023-02-14 10:14:32.293
Command: ?sputnik 3600,0,15
Gateway answer: Successful, order of message in the MT message queue 1
Date of answer, UTC: 2023-02-14 10:15:01.874

MO-message
Date of message, UTC: 2023-02-14 10:15:27.000
Type: Check mailbox request
Message body: Empty message

MO-message
Date of message, UTC: 2023-02-14 10:15:35.000
Type: Answer on request
Message body: ?SPUTNIK:Timeout=3600,Mode=0,MaxBytes=15;

MO-message
Date of message, UTC: 2023-02-14 10:15:44.000
Type: Acknowledgement

POSITION REPORTS:
ОТЧЕТЫ О ПОЗИЦИИ:

No.	Latitude	Longitude	Speed, kt	Course, dg	Date of position, UTC	MOMSN	Time of session, UTC	Date of receipt, UTC
21	76,9022	70,9349	1.08	7.00	2023-02-15 06:19:55.000	26499	2023-02-15 06:20:04.000	2023-02-15 06:20:05.000
20	76,8862	70,9328	0.54	2.00	2023-02-15 05:19:40.000	26498	2023-02-15 05:19:54.000	2023-02-15 05:19:55.000
19	76,8752	70,8799	10.80	80.00	2023-02-15 04:19:32.000	26497	2023-02-15 04:19:40.000	2023-02-15 04:19:40.000
18	77,0052	70,2585	11.88	127.0 0	2023-02-15 03:19:21.000	26496	2023-02-15 03:19:32.000	2023-02-15 03:20:08.000
17	77,0377	69,5400	11.34	318.0 0	2023-02-15 02:19:08.000	26495	2023-02-15 02:19:20.000	2023-02-15 02:20:26.000
16	76,8707	69,9570	10.80	332.0 0	2023-02-15 01:18:58.000	26494	2023-02-15 01:19:07.000	2023-02-15 01:19:08.000
15	76,7633	70,6345	12.96	318.0 0	2023-02-15 00:18:47.000	26493	2023-02-15 00:18:58.000	2023-02-15 00:18:59.000
14	76,6104	71,1045	12.42	350.0 0	2023-02-14 23:18:36.000	26492	2023-02-14 23:18:46.000	2023-02-14 23:18:48.000
13	76,4159	71,1597	10.26	345.0 0	2023-02-14 22:18:25.000	26491	2023-02-14 22:18:36.000	2023-02-14 22:18:36.000
12	76,2508	71,1219	2.16	171.0 0	2023-02-14 21:18:13.000	26490	2023-02-14 21:18:23.000	2023-02-14 21:18:24.000
11	76,2487	71,1042	0.00	0.00	2023-02-14 20:17:59.000	26489	2023-02-14 20:18:12.000	2023-02-14 20:18:13.000
10	76,1276	71,1591	10.80	342.0 0	2023-02-14 19:17:48.000	26488	2023-02-14 19:17:58.000	2023-02-14 19:18:04.000
9	75,9451	71,3763	10.80	340.0 0	2023-02-14 18:17:39.000	26487	2023-02-14 18:17:47.000	2023-02-14 18:17:48.000
8	75,7659	71,5302	11.34	337.0 0	2023-02-14 17:17:21.000	26486	2023-02-14 17:17:38.000	2023-02-14 17:17:39.000
7	75,5854	71,7242	10.80	6.00	2023-02-14 16:17:09.000	26485	2023-02-14 16:17:18.000	2023-02-14 16:17:20.000
6	75,4009	71,8799	11.34	10.00	2023-02-14 15:16:53.000	26484	2023-02-14 15:17:08.000	2023-02-14 15:17:09.000
5	75,2121	71,8060	11.88	349.0 0	2023-02-14 14:16:23.000	26483	2023-02-14 14:16:34.000	2023-02-14 14:16:35.000
4	75,0242	71,9934	10.80	350.0 0	2023-02-14 13:16:13.000	26482	2023-02-14 13:16:22.000	2023-02-14 13:18:28.000
3	74,8349	72,1285	11.88	352.0 0	2023-02-14 12:16:03.000	26481	2023-02-14 12:16:13.000	2023-02-14 12:16:14.000
2	74,6413	72,2405	11.34	351.0 0	2023-02-14 11:15:54.000	26480	2023-02-14 11:16:02.000	2023-02-14 11:16:03.000
1	74,4510	72,3633	10.26	341.0 0	2023-02-14 10:15:43.000	26479	2023-02-14 10:15:53.000	2023-02-14 10:15:55.000

Remark:

This test was lasting during 20:04:11 (hh:mm:ss). More then required by testing schedule - 12h. Reports received during the first 12 hours were taken to evaluate the results.

Данный этап тестирования продолжался 20ч 4 мин 11 сек, больше чем требуется по плану тестирования (в течение 12 ч). Для оценки результатов были взяты отчеты, полученные в течение первых 12 часов.

Result: 12 Position Reports with 1 hour interval from 12 possible transmissions (100% result)/ Получено 12 отчетов о позиции по расписанию (каждый час) из 12 возможных передач (100% успешный результат)

**STOPPING OF POSITION REPORTING
ОСТАНОВКА ПРОГРАММЫ ПЕРЕДАЧИ ОТЧЕТОВ**

MT-message

Date of request, UTC: 2023-02-15 07:17:16.692

Command: ?sputnik 0,0,15

Gateway answer: Successful, order of message in the MT message queue 1

Date of answer, UTC: 2023-02-15 07:18:01.962

MO-message

Date of message, UTC: 2023-02-15 07:18:21.000

Type: Check mailbox request

Message body: Empty message

MO-message

Date of message, UTC: 2023-02-15 07:18:25.000

Type: Answer on request

Message body: ?SPUTNIK:Timeout=0,Mode=0,MaxBytes=15;

MO-message

Date of message, UTC: 2023-02-15 07:18:33.000

Type: Acknowledgement

The position reporting was stopped/Передача отчетов прекращена

TESTING IS FINISHED / ТЕСТИРОВАНИЕ ОКОНЧЕНО

Result: this equipment successfully passed LRIT test and conforms with requirements, procedures and acceptance criteria specified in **MSC.1/Circ.1307** «GUIDANCE ON THE SURVEY AND CERTIFICATION OF COMPLIANCE OF SHIPS WITH THE REQUIREMENT TO TRANSMIT LRIT INFORMATION»

Результат: данное оборудование успешно прошло тестирование ОСДР и соответствует требованиям, процедурам и критериям оценки результатов, указанных в документе **MSC.1/Circ.1307** «Руководство по проверке и сертификации судов на соответствие требованиям системы ОСДР»