



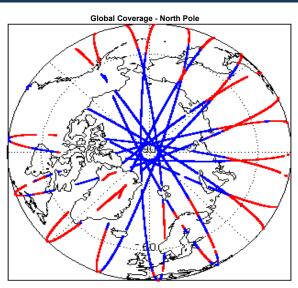
1. Overview

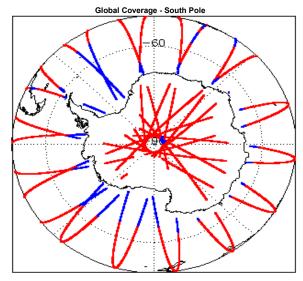
Report Production Date:	23-Jan-2017
Processor Used:	CryoSat Ocean Processor
Data Used:	Intermediate Ocean Products (IOP) L1B and L2 Science Data

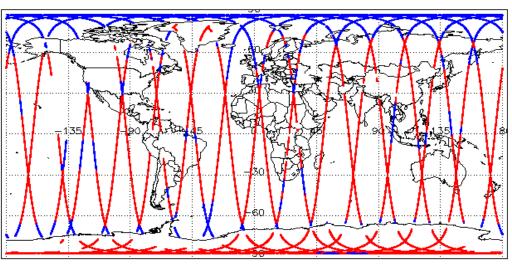
Check	Status
Server check: science-pds.cryosat.esa.int	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal
Product Software Check	Nominal
Product Format Check	Nominal
Product Header Analysis	Nominal
Auxiliary Data File Usage Check	Nominal
Auxiliary Correction Error Check	See Section 5.4
Measurement Confidence Data Check	See Section 4.6, 5.6, 5.7 and 5.8

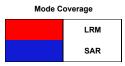
Mission / Instrument News		
20-Jan-2017	None	
21-Jan-2017	None	
22-Jan-2017	Nothing planned	

2. Global Coverage









3. Instrument Configuration

The SIRAL instrument configuration for the day of acquisition is provided below.

SIRAL instrument(s) in use: SIRAL - A

4. IOP Level 1B Data Quality Check

4.1 L1B Product Format Check

Each product, retrieved and unpacked from the science server, is checked to ensure it consists of both an XML header file (.HDR) and a binary product file (.DBL).

Number of products with errors:

0

4.2 L1B Product Header Analysis

For all products, a series of pre-defined checks are performed on the MPH and SPH in order to identify any inconsistencies and/or errors raised by the ground-segment processing chain.

4.3 L1B Auxilary Data File Usage Check

Each product is checked for missing Data Set Descriptors with respect to a pre-determined baseline and also to check the validity of Auxiliary Data Files is correct.

Number of products with errors:

4.4 L1B Auxiliary Correction Error Check

CryoSat L1B data includes a correction error flag (field 60) for each measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors:

4.5 L1B Measurement Confidence Data Check

CryoSat L1B data includes a measurement confidence flag (field 12) for each measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors:

0

4.6 L1B Waveform Group Data Check

CryoSat L1B data includes a waveform data flag (field 65) for each measurement record. The bit value of this flag indicates any problems when set.

Loss of Echo Flag: This flag is currently set for products over land, but this is to be expected.

Number of products with errors:

15

Product	Test Failed	Description
CS_OFFL_SIR_IOP_1B_20170121T024721_20170121T024844_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170121T043943_20170121T044713_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170121T050602_20170121T052354_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170121T063430_20170121T064520_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170121T071755_20170121T071813_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170121T075151_20170121T075229_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170121T095534_20170121T102131_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170121T112213_20170121T112444_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170121T135105_20170121T135345_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170121T144932_20170121T145119_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170121T171236_20170121T173021_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170121T194512_20170121T194628_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170121T194628_20170121T195815_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170121T200304_20170121T201750_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170121T225026_20170121T225535_B001	Loss of Echo	The tracking echo is missing for one or more records

5. IOP Level 2 Data Quality Check

5.1 L2 Product Format Check

Each product, retrieved and unpacked from the science server, is checked to ensure it consists of both an XML header file (.HDR) and a binary product file (.DBL).

Number of products with errors:

0

5.2 L2 Product Header Analysis

For all products, a series of pre-defined checks are performed on the MPH and SPH in order to identify any inconsistencies and/or errors raised by the ground-segment processing chain.

Number of products with errors:

0

5.3 L2 Auxiliary Data File Usage Check

Each product is checked for missing Data Set Descriptors with respect to a pre-determined baseline and also to check the validity of Auxiliary Data Files is correct.

Wind Model File Usage: This file is currently not included in all L2 products.

Number of products with errors:

(

5.4 L2 Auxiliary Correction Error Check

For all products, the auxiliary corrections within the Geophysical Group are checked for the default error value (32767).

Currently, there are two common auxiliary correction errors raised in the Level 2 products which are expected due to surface type. All common flags are summarised in the list below, followed by a table highlighting any additional issues which may arise from this test.

Sea State Bias Error: The error value is currently set for products over land and sea ice, but this is to be expected.

Altimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected.

Number of products with errors: 1

Product	Test Failed	Description
CS_OFFL_SIR_IOP_220170121T011342_20170121T011436_B001	Fauilibrium Long Period Ocean Tide	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_IOP_220170121T025046_20170121T025638_B001	Fouilibrium Long Period Ocean Tide	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_IOP_220170121T050602_20170121T052354_B001	Fauilibrium Long Period Ocean Tide	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_IOP_220170121T053502_20170121T054155_B001		There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) for one or more records
CS_OFFL_SIR_IOP_220170121T063430_20170121T064520_B001	Fauilibrium Long Period Ocean Tide	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_IOP_220170121T094153_20170121T094422_B001	Total Geocentric Ocean Tide (FES), Non-	There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT and solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records

CS_OFFL_SIR_IOP_2_20170121T144532_20170121T144707_B001	Total Geocentric Ocean Tide (FES), Non- Equilibrium Long Period Ocean Tide	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_IOP_2_20170121T160714_20170121T160834_B001	Total Geocentric Ocean Tide (FES), Non- Equilibrium Long Period Ocean Tide	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_IOP_2_20170121T181901_20170121T182115_B001	Total Geocentric Ocean Tide (GOT)	There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOP_2_20170121T190649_20170121T190828_B001	Total Geocentric Ocean Tide (FES)	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) for one or more records
CS_OFFL_SIR_IOP_2_20170121T190828_20170121T192330_B001	Total Geocentric Ocean Tide (FES), Non- Equilibrium Long Period Ocean Tide	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_IOP_2_20170121T192926_20170121T193010_B001	Total Geocentric Ocean Tide (GOT)	There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOP_2_20170121T210804_20170121T211514_B001	Total Geocentric Ocean Tide (FES), Non- Equilibrium Long Period Ocean Tide	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_IOP_2_20170121T212009_20170121T212034_B001	Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non- Equilibrium Long Period Ocean Tide	There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT and solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_IOP_2_20170121T212034_20170121T212309_B001	Total Geocentric Ocean Tide (FES), Non- Equilibrium Long Period Ocean Tide	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_IOP_2_20170121T225026_20170121T225535_B001	Total Geocentric Ocean Tide (FES), Non- Equilibrium Long Period Ocean Tide	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records

5.5 L2 Measurement Confidence Data Check

CryoSat L2 data includes a measurement confidence flag (field 14) for each 20-Hz measurement record. The bit value of this flag indicates any problems when set.

5.6 L2 Range Measurement Check

CryoSat L2 data includes an Ocean (field 25) and Ice (field 30) Range Averaging Status flag for each measurement record. The bit value of this flag indicates any problems when set.

Test Failed

Currently, there are two common status flags raised in the Level 2 products which are expected due to surface type. All common flags are summarised in the list below, followed by a table highlighting any additional issues which may arise from this test.

Ocean Range Averaging Status Flag: This flag is currently set for products over land and sea ice, but this is to be expected.

Ice Range Averaging Status Flag: This flag is currently set for products over land, but this is to be expected.

Number of products with errors:

Product Description The Ice Range Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2_20170121T003243_20170121T003829_B001 Ice Range Averaging Status The Ice Range Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T021147_20170121T021700_B001 Ice Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T034955_20170121T035147_B001 Ice Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS OFFL SIR IOP 2 20170121T035147 20170121T035154 B001 Ice Range Averaging Status The Ice Range Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T035154_20170121T035608_B001 Ice Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T043732_20170121T043823_B001 Ice Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS OFFL SIR IOP 2 20170121T052523 20170121T053046 B001 Ice Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T053046_20170121T053052_B001 Ice Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T053058_20170121T053105_B001 Ice Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS OFFL SIR IOP 2 20170121T053105 20170121T053318 B001 Ice Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T061659_20170121T061732_B001 Ice Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T070449_20170121T070944_B001 Ice Range Averaging Status The Ice Range Averaging Status Flag has been set for one or more CS OFFL SIR IOP 2 20170121T070944 20170121T070950 B001 Ice Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T070957_20170121T071003_B001 Ice Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T071021_20170121T071139_B001 Ice Range Averaging Status The Ice Range Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T071755_20170121T071813_B001 Ice Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T084425_20170121T084858_B001 Ice Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS OFFL SIR IOP 2 20170121T084858 20170121T084900 B001 Ice Range Averaging Status The Ice Range Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T084934_20170121T085053_B001 Ice Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T102419_20170121T102811_B001 Ice Range Averaging Status The Ice Range Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T102833_20170121T103158_B001 Ice Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T112213_20170121T112444_B001 Ice Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T120238_20170121T120725_B001 Ice Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T120731_20170121T121101_B001 Ice Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T134229_20170121T134754_B001 Ice Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS OFFL SIR IOP 2 20170121T152155 20170121T152652 B001 Ice Range Averaging Status The Ice Range Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T162303_20170121T162933_B001 Ice Range Averaging Status records

CS_OFFL_SIR_IOP_2_20170121T170404_20170121T170557_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170121T175802_20170121T180102_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170121T184256_20170121T184509_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2_20170121T184551_20170121T185010_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170121T193704_20170121T193738_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170121T202047_20170121T202913_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170121T215949_20170121T220145_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170121T220234_20170121T220727_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170121T233915_20170121T233946_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170121T234155_20170121T234753_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.

5.7 L2 SWH and Backscatter Measurement Check

CryoSat L2 data includes a SWH Averaging Status flag (field 49) and an Ocean (field 55) and Ice (field 61) Backscatter Averaging Status flag for each measurement record. The bit value of this flag indicates any problems when set.

Currently, there are three common status flags raised in the Level 2 products which are expected due to surface type. All common flags are summarised in the list below, followed by a table highlighting any additional issues which may arise from this test.

SWH Averaging Status Flag: This flag is currently set for products over land and sea ice, but this is to be expected.

Ocean Backscatter Averaging Status Flag: This flag is currently set for products over land and sea ice, but this is to be expected.

Ice Backscatter Averaging Status Flag: This flag is currently set for products over land, but this is to be expected.

Number of products with errors:

Test Failed Product The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T003243_20170121T003829_B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T021147_20170121T021700_B001 Ice Backscatter Averaging Status The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T034955_20170121T035147_B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T035154_20170121T035608_B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS OFFL SIR IOP 2 20170121T043732 20170121T043823 B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T053105_20170121T053318_B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T061659_20170121T061732_B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS OFFL SIR IOP 2 20170121T070449 20170121T070944 B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2_20170121T084425_20170121T084858_B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T084858_20170121T084900_B001 Ice Backscatter Averaging Status The Ice Backscatter Averaging Status Flag has been set for one or more CS OFFL SIR IOP 2 20170121T084934 20170121T085053 B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T102419_20170121T102811_B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T102833_20170121T103158_B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS OFFL SIR IOP 2 20170121T112213 20170121T112444 B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T120238_20170121T120725_B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS OFFL SIR IOP 2 20170121T120731 20170121T121101 B001 Ice Backscatter Averaging Status The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T134229_20170121T134754_B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T152155_20170121T152652_B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS OFFL SIR IOP 2 20170121T162303 20170121T162933 B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T170404_20170121T170557_B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T184256_20170121T184509_B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS OFFL SIR IOP 2 20170121T184551 20170121T185010 B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more Ice Backscatter Averaging Status CS OFFL SIR IOP 2 20170121T193704 20170121T193738 B001 records The Ice Backscatter Averaging Status Flag has been set for one or more CS OFFL SIR IOP 2 20170121T202047 20170121T202913 B001 Ice Backscatter Averaging Status The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T215949_20170121T220145_B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS OFFL SIR IOP 2 20170121T220234 20170121T220727 B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170121T233915_20170121T233946_B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more

5.8 L2 Ocean Retracking Quality Check

CS_OFFL_SIR_IOP_2__20170121T234155_20170121T234753_B001

CryoSat L2 data includes an ocean retracking quality flag (field 19) for each 20-Hz measurement record. The bit value of this flag indicates any problems when set.

Ocean Retracking Quality Flag: This flag is currently set for products over land and sea ice, but this is to be expected. The number of products with this error flag set is given below.

Ice Backscatter Averaging Status

records

6. IOP QCC Report Analysis

The Quality Control for CryoSat (QCC) facility performs a primary survey of data products immediately after production by the PDS and LTA processing facilities. A list of the tests which raised errors or warnings is provided below.

Product type	Nb. Products	Nb. QCC Reports	Nb. Valid	Nb. Warnings	Nb. Errors
SIR_IOP_1B	284	284	284	0	0
SIR_IOP_2	279	279	279	0	0

61	O	CC	Errors
U. I	w	\sim	

Number of QCC reports with errors: 0

6.2 QCC Warnings

Number of QCC reports with warnings

0

6.3 Missing QCC Reports

Number of products with missing QCC reports: