



## Assessment Certificate

*This is to certify that the development process of the undernoted product has been assessed with satisfactory results in accordance with the relevant requirements in the undernoted standards.*

This certificate is issued to:

**Manufacturer**

*WaveTrain® Systems AS*

**ADDRESS**

*P.O. Box 23,  
N-1324 LYSAKER,  
NORWAY.*

Assessed product	WTS Level Crossing Warning System; LCWS version 1.4.
Application	Level Crossing Warning System consisting of Sensor Unit, Main Assembly Unit and LCWS Application Software for Single- and Double-Track Level Crossings.
Assessed standards	CENELEC EN50126:1999, EN50128:2011, EN50129:2003 and IEC61508:2010.
Achieved Safety Integrity level (SIL)	SIL 2
Limitations and Application conditions	See Appendix 1
Assessment report	The assessment is documented in report no. 104683_R4
Certificate No.	150005/TA
Issue Date	02.05.2016
Expiry Date	NA
Sheet	1 of 2

Roar Andreassen

Independent Safety Assessor and

Assessment responsible

Lloyd's Register Consulting - Energy AS

Norway

Kristina Drage-Arianson

Independent Safety Assessor

Lloyd's Register Consulting - Energy AS

Norway



## Appendix 1

The scope of assessment and the limitations of liability are stated in the contractual documents.

Safety Related Application Conditions (SRAC) is documented in report no. 104683\_R4.

**This Assessment Certificate is valid under the following conditions:**

1. The documented Failure Rates are valid for Single- and Double-Track Level Crossings only.
2. The Safety Related Application Conditions identified by Wave Train System during the risk analysis process must be handled as part of the Specific Application for Level Crossings. Safety Related Application Conditions are documented in report no. 104683\_R4.
3. The Safety Related Application Conditions identified by the Independent Safety Assessor as part of the compliance verification towards IEC61508 must be handled as part of the Generic- and Specific Application for Level Crossings. Safety Related Application Conditions are documented in report no. 104683\_R4.
4. Any modification of the system that has any effect on Safety must be assessed and approved by the Independent Safety Assessor to retain the assessment certificate.