

DIN EN ISO 5124:2025-06 (E)

Loading and unloading of liquefied natural gas (LNG) tank wagons and containers (ISO 5124:2024)

Contents		Page
Foreword		iv
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Equipment design	3
4.1	LNG tank wagon.....	3
4.2	LNG tank container.....	3
4.3	Tanks for LNG tank wagons and tank containers.....	3
4.4	Loading or unloading bay configuration.....	6
4.5	Connection couplings.....	8
4.5.1	Type and size of connections.....	8
4.5.2	Quick connect disconnect coupler (QCDC).....	8
4.5.3	Emergency release coupling (ERC).....	8
4.6	LNG transfer hoses or arms.....	8
4.7	General process design requirements.....	9
4.7.1	General.....	9
4.7.2	Overfill detection and overpressurization.....	9
4.7.3	Loading and unloading process.....	10
4.7.4	Quantity and quality measurement.....	10
4.7.5	Sampling.....	11
4.7.6	Predicting LNG quality change due to ageing.....	11
5	Leak and fire management	11
5.1	Leak avoidance, detection and management.....	11
5.1.1	General.....	11
5.1.2	Avoidance.....	11
5.1.3	Gas detection.....	12
5.1.4	Management.....	12
5.2	Fire avoidance, detection and management strategies.....	13
5.2.1	Fire avoidance.....	13
5.2.2	Fire detection.....	13
5.2.3	Fire management.....	13
6	Layout considerations	13
6.1	Safety separation distances.....	13
6.2	Typical equipment layout.....	13
6.3	Buildings.....	13
7	Commissioning and start-up	14
8	Operations	15
8.1	Initial checks.....	15
8.2	Weighing before loading or unloading operation.....	15
8.3	Loading terminal.....	16
9	Stakeholder analysis	16
Bibliography		18