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| 1. **INTRODUCTION TO MEASUREMENTS**
 |
| The term "Measuring is knowing and guessing is missing" speaks for itself. When measurements are required for a specific task, i.e. working in hazardous atmospheres or where the work itself can create it, it is important that this is done in a correct manner with the appropriate tools. |

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| 1. **REQUIREMENTS FOR MEASUREMENTS**
 |
| **CHECK** |
| 1. **GENERAL GUIDELINES FOR MEASURING EQUIPMENT**
 |  |
| 1. Only authorised, calibrated and inspected measuring equipment
 |  |
| * + - valid and identified by law/governing body
 |  |
| 1. Only trained persons
 |  |
| * + - are permitted to take measurements and observations must be properly interpreted
 |  |
| 1. Inspect the equipment before each measurement
 |  |
|  |  |
| 1. **WHICH MEASUREMENTS**
 |  |
| 1. Oxygen content
 |  |
| * + - with oxygen meter,
		- minimum permissible oxygen concentration: 18 %(or more stringent according to local legal requirements)
 |  |
| **E.g**.: Entry into tanks after degassing, when welding in a confined space, ... |  |
| 1. Vapour or gas concentrates
 |  |
| * + - with explosion meter
		- maximum permissible concentration: 10 % of the LEL
 |  |
| **E.g.**: when working in explosive areas in depots, inside pumps in stations, ... |  |
| 1. Toxic substances
 |  |
| * + - with gas-identification tubes or special meters
		- maximum permissible concentration:
			* general 🡪 50 % of the MAC value (maximum allowable concentration)
			* for CO 🡪 10 ppm (parts per million)
 |  |
| **E.g.**: When welding in confined spaces, excavation of contaminated soil ... |  |
|  |  |
| 1. **FREQUENCY OF MEASUREMENTS**
 |  |
| 1. Always BEFORE START of work / entry / access
 |  |
| 1. CONTINUOUS, if
 |  |
| * + - dust is released while working
		- there is no certainty about the presence of substances
 |  |
|  |  |

**KUWAIT PETROLEUM NORTH WEST EUROPE**

DOCUMENT TITLE: TSR - Measurements / Hazardous atmospheres

DOCUMENT NUMBER: KPNWE.WI.11.HSCO.075

REVIEW NUMBER: 2

EFFECTIVE DATE: 08 Jul 2020

NEXT REVIEW DATE: 08 Jul 2023

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# \*Access rights: Generally Accessible [x]

**Reviews Summary**

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| --- | --- | --- | --- |
| **Review date** | **Review reference** | **Review details** | **Review version** |
| **01 Dec 2017** |  |  | **0** |
| **15 Feb 2018** | **--** | **Doc title changed from 'TSR - Measurements of dangerous goods' to 'TSR - Measurements / Hazardous atmospheres'** | **1** |
| **08 Jul 2020** | **--** | **minor changes** | **2** |