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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 |  |
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**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

**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** |