



D-88427 Bad Schussenried
Thomas Maier
phone: + 49(0)7583/949-414
Fax: + 49(0)7583/949-399
email: thomas.maier@liebherr.com
www.water-content-measurement.com

1. change of density:

Up to 5 specific product-curves can be stored in the memory of the sensor.
The curves for a specified medium density (density of crude oil)
can be stored within the product-curves.

The explanations to program and to switch-over the curve via MINICOM are listed in our operating manual, chapter 5.3.7, page 26.

This parametrisation is important for:

Explanation digits:

Digits is the smallest measuring unit our sensor is working with. By using of correction curves digits values are assigned corresponding water content.
For determination of correction curves digit values can be displayed by MINICOM or WIO-Software.

The change is appr. 40 digits per % water content.

Examples for density influence:

density crude oil	800kg/m ³	0% water content	1700 Digits
density crude oil	900kg/m ³	0% water content	1900 Digits

The difference of the digits based on these densities is 200 digits.

If there is a sensor curve with a density of 800 kg/m³ or 1700 digits selected and a oil with a density of 900 kg/m³ or 1900 digits is used, the sensor will indicate 5% water content instead of the correct value of 0 % water content.

Due to this reason the measuring curve has to switch-over on each change of product, especially change of density.

Explanation:

The result of the division of 200 digits ÷ 40 digits / %
(difference digits 1700 to 1900 divide through 40 digits / % water content)
is 5 %

$$200 \div 40 / \% = 5 \%$$