

Accepted Manuscript

The application of high resolution X-ray computed tomography on naturally deformed rock salt: Multi-scale investigations of the structural inventory

Nicolas Thiemeyer, Jörg Habersetzer, Mark Peinl, Gernold Zulauf, Jörg Hammer



PII: S0191-8141(15)00113-3

DOI: [10.1016/j.jsg.2015.05.014](https://doi.org/10.1016/j.jsg.2015.05.014)

Reference: SG 3230

To appear in: *Journal of Structural Geology*

Received Date: 26 February 2015

Revised Date: 21 April 2015

Accepted Date: 13 May 2015

Please cite this article as: Thiemeyer, N., Habersetzer, J., Peinl, M., Zulauf, G., Hammer, J., The application of high resolution X-ray computed tomography on naturally deformed rock salt: Multi-scale investigations of the structural inventory, *Journal of Structural Geology* (2015), doi: 10.1016/j.jsg.2015.05.014.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

1 The application of high resolution X-ray computed tomography on naturally deformed rock
2 salt: Multi-scale investigations of the structural inventory

3

4 Nicolas Thiemeyer^{1*}, Jörg Habersetzer², Mark Peinl¹, Gernold Zulauf¹, Jörg Hammer³

5

6 ¹Institute of Geoscience, Goethe University Frankfurt am Main, Altenhöferallee 1, 60438
7 Frankfurt am Main, Germany (n.thiemeyer@em.uni-frankfurt.de, +49 69 798 40198;
8 g.zulauf@em.uni-frankfurt.de)

9

10 ²Senckenberg Research Institute and Natural History Museum Frankfurt am Main,
11 Senckenberganlage 25, 60325 Frankfurt am Main, Germany
12 (joerg.habersetzer@senckenberg.de)

13

14 ³Federal Institute for Geosciences and Natural Resources (BGR), GeoZentrum Hannover,
15 Stilleweg 2, 30655 Hannover, Germany (joerg.hammer@bgr.de)

16

17 Keywords: Computed tomography; Rock salt; Anhydrite; Fluid inclusions; Microstructures

18

19 Abstract

20 X-ray computed tomography (CT) represents a useful technique providing new perspectives
21 and insights for the structural investigation of naturally-deformed rock salt. Several samples
22 of Permian rock salt from Gorleben, Asse and Teutschenthal (Germany) were investigated by
23 exploiting the non-destructive nature of μ CT and nCT techniques particularly for salt rocks.
24 CT imaging enabled the visualization and quantification of anhydrite impurities, pore space

Download English Version:

<https://daneshyari.com/en/article/6444734>

Download Persian Version:

<https://daneshyari.com/article/6444734>

[Daneshyari.com](https://daneshyari.com)