

DOI: 10.14489/td.2014.01.pp.069-075

Evstigneev A.A., Debelyak A.A., Muravyev V.I., Lonchakov S.Z., Pitcyk V.S.
QUALITY CONTROL OF STRUCTURAL CHANGES IN ZONES LOCAL DESTRUCTION
PIPELINE SYSTEMS OIL PRODUCTS
(pp. 69–75)

Annotation. Found that the most dangerous type of corrosion is pitting TSPN. Macrostructure studies and electronic fractography established presence on the inner surface of solid samples dense black deposits. Chemical analysis showed that deposits are the products of sulfide corrosion also revealed elevated mobile hydrogen in the metal. Based on the volume and thickness measurement of the results of measurements of the coercive force, the mechanism of local catastrophic corrosion of TSPN. A method of non-destructive quality control of welding and subsequent heat TSPN, which will prevent accidents

Keywords: corrosion, micro-and macro-structure, cavitation, thickness, coercive force, sulfide deposits

{slider=About the Authors}

A. A. Evstigneev

Komsomolsk-on-Amur State Technical University, Ltd. « RN-Komsomolsk Refinery»,
Komsomolsk-on-Amur, Russia. E-mail: ktsp@knastu.ru

[](#)

A. A. Debelyak

Komsomolsk-on-Amur State Technical University, JSC «Amurlitmach», Komsomolsk-on-Amur,
Russia. E-mail: ktsp@knastu.ru

[](#)

V. I. Muravyev, S. Z. Lonchakov, V. S. Pitcyk

Komsomolsk-on-Amur State Technical University, Komsomolsk-on-Amur, Russia. E-mail: ktsp@knastu.ru

{/slider}

{slider=Reference)}

1. Luk'ianov S. I., Butin A. V., Evstigneev A. A. (2010). Magnetic identification of material microstructure. *Kontrol'. Diagnostika*, (10).
2. Kolotyркиn Ia. M. (1985). *Metal and corrosion*. Moscow: Metallurgiiia.
3. Zaichenko V. N. (2002). *The new technology of repair of the steel tanks*. Moscow: OAO «TsNIITEnftekhim».
4. Murav'ev V. I., Bakhmatov P. V., Frolov A. V. (2011). The impact of structural changes of metal pipes on the damage of pipeline systems of oil refining. *Khimicheskoe i neftegazovoe mashinostroenie*, (9), pp. 42 – 46.
5. Murav'ev V. I., Evstigneev A. A., Bakhmatov P. V., Butin A. V. (2011). Analytical estimation and development of methods to increase the corrosion resistance of structural steel of TSPN type. *Uchenye zapiski Komsomol'skogo-na-Amure gosudarstven-nogo tekhnicheskogo universiteta*, IV-1(8), pp. 58 – 70.
6. Kim V. A., Murav'ev V. I., Luk'ianov S. I., Butin A. V. (2012). Corrosion processes and working resource of technological pipelines of ELOU-AVT-3. *Khimicheskoe i neftegazovoe mashinostroenie*, (11), pp. 35 – 38.
7. Uling G. G., Revi R. U. (1989). *Corrosion prevention. Introduction in corrosion science and technology*. Leningrad: Khimiia.

{/slider}

{slider=Purchase digital version of a single article}

This article is available in electronic format (PDF).

The cost of a single article is 250 rubles. (including VAT 18%). After you place an order within a few days, you will receive following documents to your specified e-mail: account on payment and receipt to pay in the bank.

After depositing your payment on our bank account we send you file of the article by e-mail.

To order articles please fill out the form below:

{jform=2,doi=10.14489/td.2014.01.pp.069-075}

{/slider}

{backbutton}