**at „SGS BULGARIA“ EOOD, SOFIA**

**Inspection body „Control and Diagnostics of Equipment” type А**

**Management address:**

1784, Sofia, Mladost district, 115 G Tsarigradsko Shose Blvd., MEGAPARK Business Center, floor б, office С

**Office address:**

8104, Burgas, Production site of LUKOIL NEFTOHIM BURGAS JSC, Nondestructive Testing Building

**To perform inspection according to the following scope:**

| **Type of the scope:** *flexible for part of the scope* \* |
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| **№** | **Field of Inspection** | **Type of Inspection** | **Parameter of Inspection / Characteristic** | **Test and Measurement Methods Used During Inspection, Inspection Procedure** | **Regulations, Standards, Specifications, Schemes** |
| **1** | **2** | **3** | **4** | **5** | **6** |
| 1. | Pi Pipelines - technological and main pipelines for different environments, incl. vapour, hot water, crude oil and petroleum products; gas facilities and installations, tanks for storage of different media, incl. crude oil and petroleum products; pressure vessels, incl. high and low-pressure boilers; elements and systems of turbines; lifting and handling machines and equipment; machinery, equipment, structures and components for them - basic metal and welded joints; rolled products, casts and forgings | Initial and/orperiodic inspection ofnew and/orused/operatedsites/facilities/processes/products | Type and size ofnon-integrities/ imperfections | Ultrasound testing: РПК 00-05 БДС 9233 БДС 9234 (cancelled without replacement)БДС 13661 БДС 9824 БДС 10037 (cancelled without replacement)БДС EN 10160 БДС EN ISO 10893-8 БДС EN ISO 10893-8/A1БДС 13598 (cancelled without replacement)БДС EN ISO 17640 БДС EN ISO 16810 БДС EN ISO 16811 БДС EN ISO 16823БДС EN ISO 16826 БДС EN ISO 16827 БДС EN ISO 23279 БДС EN ISO 6520-1БДС EN 10228-3БДС EN 10228-4БДС EN 12680-1БДС EN 12680-2БДС EN 12680-3БДС EN 10306БДС EN 10307БДС EN 10308ISO 4386-1 | НУБЕТНСН, Art. 19, Art. 21, Art. 53, (SG № 64/2008) НУБЕПРГСИУПГ, Art. 9, Art. 127, (SG № 67/2004) НУБЕТНГСИВВГ , Art. 105(SG № 82/2004) НУБЕНПНПП, Art, 7, Art. 2б(SG № 104/2004)ИКМОТСЕСКТТТЕЦ, НЕK, 1996 НЕРМР ”ЛНБ”(НК1-03-502-6.3)ИПЕРБРСТТ”ЛНБ”(ИК 1-02-016-6.3) БДС EN ISO 17635 БДС 13661 БДС EN 10160 БДС EN ISO 10893-8 БДС EN ISO 10893-8/A1БДС EN ISO 11666 БДС EN 14015 БДСЕN 13445-5 БДС EN 13480-5 БДС EN 14163 БДС EN 14163/АСБДС EN 12732БДС EN ISO 5817БДС EN 10228-3БДС EN 10228-4БДС EN 12680-1БДС EN 12680-2БДС EN 12680-3БДС EN 10306БДС EN 10307БДС EN 10308ISO 4386-1ASME B 31.3НП -084НП-105ГОСТ Р 50.05.17СНиП 3.05-05TS |
| 2. | Pipelines — technological and main pipelines for different environments, incl. vapour, hot water, crude oil and petroleum products; gas facilities and installations, tanks for storage of different media, incl. crude oil and petroleum products; pressure vessels, incl. high and low-pressure boilers; elements and systems of turbines; lifting and handling machines and equipment; machinery, equipment, and structures and components for them - basic metal and welded joints; rolled products, casts and forgings. | Initial and/orperiodicinspection ofnew and/orused/operatedsites/facilities/processes/products | Testing of wall thickness, by using ultrasonic testing method | Wall thickness: РПК 00-01 БДС EN ISO 16809 | НУБЕТНСН, Art. 53, (SG № 64/2008) НУБЕПРГСИУПГ , Art. 9, Art. 87, Art. 127, (SG № 67/2004) НУБЕТНГСИВВГ, Art. 5, Art. 6 (SG № 82/2004) НУБЕНПНПП, Art. 7, Art. 13 (SG № 104/2004) ИКМОТСЕСКТТТЕЦ, НЕК , 1996 ОМТОР LNB(НК1-03-502-6.3) IDORSOSPP LNB(ИК 1-02-016-6.3) TS |
| 3. | Pipelines — technological and main pipelines for different environments, incl. vapour, hot water, crude oil and petroleum products; gasfacilities and installations, tanks for storage of different media, incl**.** crude oil and petroleum products; pressure vessels, incl. high and low-pressure boilers; elements and systems ofturbines; lifting andhandlingmachines andequipment;machinery, equipment, structures andcomponents for them -basic metal andweldedjoints;rolled products, casts andforgings | Initial and/orperiodicinspection ofnew and/orused/operatedsites/facilities/processes/products | Type and size ofnon-integrities/ imperfections | Radiographic testing:РПК 00-04 БДС EN 12681-1 БДС EN ISO 17636-1 БДС EN ISO 5579 БДС EN ISO 10893-6ГОСТ Р 50.05.07 | НУБЕТНСН, Art. 19, Art. 21, Art. 53, (SG № 64/2008) НУБЕПРГСИУПГ, Art. 9, Art. 127, (SG № 67/2004) НУБЕТНГСИВВГ , Art. 105 (SG № 82/2004) НУБЕНПНПП, Art. 7, Art. 26 (SG № 104/2004) ИКМОТСЕСКТТТЕЦ, НЕК, 1996 ОМТОР LNB(НК1-03-502-6.3) ИПЕРБРСТТ ”ЛНБ”(ИК 1-02-016-6.3)БДС EN ISO 6520-1 БДС EN ISO 10042 БДС EN 14015 БДС EN 14163 БДС EN 14163/АСБДС EN 12732 БДС EN 13445-5 БДС EN 13480-5 БДС EN ISO 5817 БДС EN ISO 17635 БДС 13060 БДС EN ISO 10675-1 БДС EN ISO 10675-2 ASME В 31.3 БДС EN ISO 10893-6НП-084НП-105ГОСТ Р 50.05.17СНиП 3.05-05TS |
| 4. | Pipelines — technological and main pipelines for different environments, incl. vapour, hot water, crude oil and petroleum products; gas facilities and installations, tanks for storage of different media, incl. crude oil and petroleum products; pressure vessels, incl. high and low-pressure boilers; elements and systems of turbines; lifting and handling machines and equipment; machinery, equipment, and structures and components for them - basic metal and welded joints; rolled products, casts and forgings | Initial and/orperiodicinspection ofnew and/orused/operatedsites/facilities/processes/products | Type and size of surface andsubsurfacenon-integrities/indications | Magnetic-particle testing: РПК 00-02 БДС 7156 БДС 15575 БДС 15575/Amendment 1 БДС EN 1369 БДС EN ISO 17638БДС EN ISO 9934-1БДС EN 10228-1БДС EN ISO 10893-5 | НУБЕТНСН, Art. 21, Art. 53, (SG № 64/2008) НУБЕПРГСИУПГ, Art. 9, Art. 127, (SG № 67/2004) НУБЕНПНПП, Art. 7(SG № 104/2004) ИКМОТСЕСКТТТЕЦ, НЕК, 1996 ИПЕРБРСТТ”ЛНБ”(НК1-03-502-6.3)IDORSOSPP LNB(ИК 1-02-016-6.3)БДС EN ISO 6520-1БДС EN 14015 БДС EN 14163 БДС EN 14163 / АСБДС EN 12732 БДС EN 13445-5 БДС EN 13480-5 БДС EN ISO 17635 БДС EN ISO 23278 БДС EN 1369 БДС EN ISO 5817БДС EN 10228-1БДС EN ISO 10893-5 ASME В 31.3 НП-084НП-105ГОСТ Р 50.05.17СНиП 3.05-05 TS |
| 5. | Pipelines — technological and main pipelines for different environments, incl. vapour, hot water, crude oil and petroleum products; gas facilities and installations, tanks for storage of different media, incl. crude oil and petroleum products; pressure vessels, incl. high and low-pressure boilers; elements and systems of turbines; lifting and handling machines and equipment; machinery, equipment, structures and components for them - basic metal and welded joints; rolled products, casts and forgings | Initial and/orperiodicinspection ofnew and/orused/operatedsites/facilitiesprocesses/products | Type and size ofnon-integrities / indications opened to the surface | Liquid penetrate testing:РПК 00-03 БДС EN 1371-1 БДС EN 1371-2 БДС EN ISO 3452-1 БДС EN ISO 3452-3БДС 15830БДС EN 10228-2БДС EN ISO 10893-4ISO 4386-3ГОСТ Р 50.05.09 | НУБЕТНСН, Art. 21, Art. 53, (SG № 64/2008) НУБЕПРГСИУПГ, Art. 9, Art. 127, (SG № 67/2004) НУБЕНПНПП, Art. 7(SG№ 104/2004) ИКМОТСЕСКТТТЕЦ, НЕК , 1996 НЕРМР LNB(НК1-03-502-6.3) ИПЕРБРСТТ LNB(ИК 1-02-016-6.3) БДС EN ISO 6520-1БДС EN ISO 17635БДС EN ISO 23277 БДС EN 14015 БДС EN 14163 БДС EN 14163/АСБДС EN 12732 БДС EN 13445-5 БДС EN 13480-5 БДС EN 1371-1 БДС EN 1371-2 БДС EN ISO 5817БДС EN 10228-2БДС EN ISO 10893-4ISO 4386-3 ASME В 31.3 НП-084НП-105ГОСТ Р 50.05.17СНиП 3.05-05 TS |
| 6. | Pipelines — technological and main pipelines for different environments, incl. vapour, hot water, crude oil and petroleum products; gas facilities and installations, tanks for storage of different media, incl. crude oil and petroleum products; pressure vessels, incl. high and low-pressure boilers; elements and systems of turbines; lifting and handling machines and equipment; machinery, equipment, and structures and components for them - basic metal and welded joints; rolled products, casts and forgings | Initial and/orperiodicinspection ofnew and/orused/operatedsites/facilities/processes/products | Type and size ofnon-integrities / indications opened to the surface | Visual testing:РПК 00-40 БДС EN 1370 БДС EN 13018 БДС EN 13018/A1БДС 5177 БДС EN ISO 17637 ГОСТ Р 50.05.08 | НУБЕТНСН, Art. 19, Art. 21, Art. 53, (SG № 64/2008) НУБЕПРГСИУПГ, Art. 9, Art. 127, (SG № 67/2004) НУБЕНПНПП , Art. 7(SG № 104/2004) ОМТОР LNB(НК1-03-502-6.3) IDORSOSPP LNB(ИК 1-02-016-6.3) БДС EN ISO 6520-1 БДС EN ISO 17635 БДС EN 14015 БДС EN 14163 БДС EN 14163/АС БДС EN 12732 БДС EN 13445-5 БДС EN 13480-5 БДС EN ISO 10042 БДС EN ISO 5817 НП-084НП-105ГОСТ Р 50.05.17СНиП 3.05-05 TS |
| 7. | Pipelines — technological and main pipelines for different environments, incl. vapour, hot water, crude oil and petroleum products; gas facilities and installations, tanks for storage of different media, incl. crude oil and petroleum products; pressure vessels, incl. high and low-pressure boilers; elements and systems of turbines; lifting and handling machines and equipment; machinery, equipment, structures and components for them - basic metal and welded joints; rolled products, casts and forgings | Initial and/orperiodicinspection ofnew and/orused/operatedsites/ facilities/ processes/ products | Tightness rate – presence/absence of leakage | Gas hydraulic method of testing with use of foaming compositions.Method of testing: bubbling test: РПК 00-41 БДС 17111, III. 2 БДС EN 1593 БДС EN 1593/А1 | НУБЕТНСН , Art. 19, Art. 21, Art. 53, (SG № 64/2008)НУБЕПРГСИУПР, Art. 9, Art. 127, (SG № 67/2004)НУБЕНПНПП, Art. 7 (SG №104/2004)НЕРМР LNB (НК1-03-502-6.3)IDORSOSPP LNB(ИК 1-02-016-6.3) БДС EN 13445-5БДС EN 13480-5 БДС EN 1593 БДС EN 1593/А1 TS |
| 8. | Pipelines — technological and main pipelines for different environments, incl. vapour, hot water, crude oil and petroleum products; gas facilities and installations, tanks for storage of different media, incl. crude oil and petroleum products; pressure vessels, incl. high and low-pressure boilers; elements and systems of turbines; lifting and handling machines and equipment; machinery, equipment, and structures and components for them - basic metal and welded joints; rolled products, casts and forgings | Initial and/orperiodicinspection ofnew and/or used/operated sites/facilities/ processes/products | Hardness testing by: Brinell, НВ-once;Vickers, НV-once;Rockwell, HRC-once By Leeb’s method | Hardness testing:РПК 00-09БДС EN ISO 16859-1 | НУБЕТНСН, Art. 53(SG № 64/2008)ИКМОТСЕСКТТТЕЦ NEK, 1996 НЕРМР LNB(НК1-03-502-6.3) IDORSOSPP LNB(ИК 1-02-016-6.3) БДС 4758 БДС 8424 БДС 8308 БДС 15018 БДС 6942 БДС 9625 БДС 16840 БДС EN 14015 БДС EN 12952-6 БДС EN 13445-5БДС EN 13480-5 TS |
| 9. | Steel metal products | Initial and/orperiodic inspection of new and/or used/operated sites/ facilities/ processes/products | Content of chemical elements by spectral analysis in steels: Carbon -C Manganese - Mn Chromium - Cr Nickel Ni Silicon - SiCopper - Cu Titanium -T Molybdenum - Mo Vanadium - V Cobalt - Co Aluminum - Al Tungsten - V | Spectral analysis РПК 00-15 ФН М 004-2017\*\* | НУБЕТНГСИВВГ, Art. 5 (SG № 82/2004) НУБЕНПНПП, Art. 25(SG № 104/2004)ИКМОТСЕСКТТТЕЦ, NEK, 1996 ИПЕРБРСТТ LNB(ИК 1-02-016-6.3) StahlschlüsselБДС ЕN 14015 БДС EN 13445-5БДС EN 13480-5 БДС 9801 БДС 13568 БДС 4758 TS |
| 10. | Elbows and pipe from conduits, heating surfaces and turbine shafts through linear dimensions | Initial and/orperiodicinspection ofnew and/orused/operatedsites/facilities/processes/products | Ovality | Geometrical dimension testing:РПК 00-06БДС EN 12952-5, p.7.3БДС EN 13480-4, p.7.4 IMIETCESBTPTPP, NEK, 1996 | ИКМОТСЕСКТТТЕЦ, NEK, 1996 БДС EN 12952-5 БДС EN 13480-4 TS |
| 11 | Dielectric insulating anticorrosion coating of vessels, pressure vessels, gas facilities and installations, pipelines, machinery and equipment, structures and components for them | Initial and/orperiodic inspection of new and/or used/operated sites/ facilities/ processes/products  | Thickness and overall dielectric insulating anticorrosion coating: presence/absence of puncture  | Inspection by electric spark method: РПК 00-42 БДС 15705/amendment 1 | НУБЕТНСН, Art.19, Art.21, Art.53 (SG № 64/2008 amd. SG № 60/2018) НУБЕТНГСИВВГ, (SG, № 82/2004, amd. SG, №64 /2008)НУБЕПРГСИУПГ, Art. 9, Art.127 (SG № 67/2004, amd. SG, № 60/2018)OCSOOOPP, Art. 7 (SG, № 104/2004, amd. SG, №60/2018)ОМТОР LNB(НК1-03-502-6.3)IDORSOSPP LNB(ИК 1-02-016-6.3)БДС 15705 /amendment 1 TS |
| 12 | Pipelines - technological and main pipelines for different environments, incl. vapour, hot water, crude oil and petroleum products; gas facilities and installations, tanks for storage of different media, incl. crude oil and petroleum products; pressure vessels, incl. for transportation of compressed, liquefied, gases dissolved under pressure and cryogenic liquids; high and low-pressure boilers; elements and systems of turbines; lifting and handling machines and equipment; machinery, equipment, structures and components for them - basic metal and welded joints; rolled products, casts and forgings. | Initial and/orperiodic inspection of new and/or used/operated sites/ facilities/ processes/products | Coating thickness- Thickness of non-conductive coatings or non-magnetic and metallic coatings on metallic and non-metallic base - Thickness of non-magnetic coatings on a magnetic base  | Measurement of coating thickness of ferritic and non-ferritic metal surfaces by magnetic induction method:Eddy current inspection methods: РПК 00-38;БДС EN IS0 2808;БДС EN IS0 2360; БДС EN IS0 21968.Magnetic- particle inspection: РПК 00-38;БДС EN IS0 2808; БДС EN IS0 2178; БДС EN IS0 2361. | БДС EN ISO 2808;БДС EN IS0 8503-1БДС ISO 19840; БДС EN IS0 21968; БДС EN ISO 2360; TS |
| 13 | Pipelines - technological and main pipelines for different environments, incl. vapour, hot water, crude oil and petroleum products; gas facilities and installations, tanks for storage of different media, incl crude oil and petroleum products; pressure vessels, incl. for transportation of compressed, liquefied, gases dissolved under pressure and cryogenic liquids; high and low-pressure boilers; elements and systems of turbines; lifting and handling machines and equipment; machinery, equipment, structures and components for them - basic metal and welded joints; rolled products, casts and forgings. | Initial and/orperiodic inspection of new and/or used/operated sites/ facilities/ processes/products | Average roughness / surface profile | Determination of average roughness surface profile: РПК 00-39БДС EN IS0 8503-1БДС EN IS0 8503-4 | БДС EN IS0 8503-1 БДС EN IS0 8503-4 TS |
| 14. | Destructive testing of: pipelines - technological and main pipelines for various environments, incl. vapour, hot water, crude oil and petroleum products; gas facilities and installations, tanks for storage of various media, incl. crude oil and petroleum products; pressure vessels, incl. for transportation of compressed, liquefied, pressure-dissolved gases and cryogenic liquids; high and low-pressure boilers; components and systems of turbines; lifting and transporting machines and equipment; machinery, equipment, and structures and components for them - basic metal and welded joints; profiled and rolled products, casts and forgings | Initial and/orperiodicinspection ofnew and/orused/operatedsites/facilities/processes/products | Minimum stress/ tensile strength under adhesion of single-layer or multi-layer systems of paints, varnishes | Determination of minimum tensile stress/strength under adhesion of single-layer or multi-layer systems of paints, varnishes:РПК 00-10БДС EN ISO 4624,БДС EN ISO 16276-1 | БДС EN ISO 13076БДС EN ISO 16276-1TS |
| 15. | Destructive testing of: Pipelines - technological and main pipelines for various environments, incl. vapour, hot water, crude oil andpetroleum products, gas facilities and installations, tanks for storage of various media, incl. crude oil and petroleum products; pressure vessels, incl. for transportation of compressed, liquefied, pressure-dissolved gases and cryogenic liquids; high and low-pressure boilers; components and systems of turbines; lifting and handling machines and equipment; machinery, equipment, structures and components for them - basic metal and welded joints; rolled products, casts and forgings | Initial and/orperiodicinspection ofnew and/orused/operatedsites/facilities/processes/products | Appearance of the surface in the area of cross-cut testing of single-layer or multi-layer systems of paints, varnishes  | Visual method of cross-cut testing: РПК 00-11 БДС EN ISO 2409 БДС EN ISO 16276-2 | БДС EN ISO 13076БДС EN ISO 2409 БДС EN ISO 16276-2 |

**\*Flexible scope:**

*The introduction of a new version of standards/documents or standards/documents that replace them is allowed. An up-to-date list of standards/documents with their dated versions is provided by the Conformity assessment bodies.*

НУБЕТНСПН - Ordinance adopted with CM Decree № 164, Ordinance on the Construction, Safe Operation and Technical Surveillance of Pressure Equipment (SG № 64/2008);

НУБЕПРГСИУПГ –Ordinance adopted with CM Decree № 171, Ordinance on the Construction and Safe Operation of the Transmission and Distribution Pipelines and of the Facilities, Installations and Appliances for Natural Gas 67/2004);

НУБЕТНГСИВВГ - Ordinance adopted with CM Decree № 243, Ordinance on the Construction, Safe Operation and Technical Surveillance of Gas Facilities and Installations for Liquefied Hydrocarbon Gases (SG № 82/2004);

НУБЕНПНПП - Ordinance on the Construction and Safe Operation of Oil and Oil Product Pipelines (SG № 104/2004);

ИКМОТСЕСКТТТЕЦ - Instruction on Metal Inspection and Evaluation of Technical Condition of Elements and Systems of Boilers, Turbines and Pipeworks at TPPs, NEK EAD, 1996;

Stahlschlüssel - Steel key, Publisher: Verlag Stahlschlüssel, Wegst GmbH;

НП-084-15 - Federal norms and rules in the field of the use of nuclear energy "Rules for the control of base metal, welded joints and welded surfaces during the operation of equipment, pipelines and other elements of nuclear power plants", Approved by order of the Federal Service for Ecological, Technological and Nuclear Supervision dated December 7, 2015 № 502, Registered with the Ministry of Justice of Russia on March 10, 2016 № 41366, Update date: 01/01/2019;

СНиП 3.05.05-84 - Building regulations. Technological equipment and technological pipelines (Approved by the Decree of the USSR Gosstroy of May 7, 1984 № 72), Publishing House of the Federal State Unitary Enterprise TsPP, Moscow 1985, Update date: 01/01/2019;

НЕРМР „ЛНБ“ (НК 1-03-502-6.3)- Ordinance on Metal Tank Operation and Repair, Lukoil Neftochim Bourgas;

ИПЕРБРСТТ „ЛНБ“ (ИК 1-02-016-6.3) - Instruction on the Design, Operation, Repair and Safe Operation of Steel Process Pipelines at Lukoil Neftochim Bourgas;

TS - Technical Specification.

\*\* Fixed scope

ФН М 004-2017 - Validated in-house methodology, Spectral Method for Chemical Analysis of Steel Metal Products, 01.08.2017