COMPETENCE OF WELDING PERSONNEL AS ONE OF THE FACTORS INFLUENCING THE SAFETY OF PE PIPELINES USAGE.

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Polyethylene (PE) gas pipelines are designed for a period of minimum 50 years. Many factors have influence on the failure-free operation of gas pipelines during a set period of time. One of them is the proper strength of welded joints, which depends on:

- *quality of the welded pipes and fittings,*
- *conditions of the welding process,*
- *weather conditions,*
- *quality of the welding equipment,*
- *qualifications of the welding personnel.*

The qualifications of the welding personnel constitute a very important factor influencing the quality and durability of gas pipelines. The welding personnel must know which procedures should be applied in thewelding process. In addition to the maintenance of the required parameters of the welding process, also the correct preparation of the welded pieces has a big influence on the quality of the welded joint. The pieces should be coaxially attached and the surfaces should be milled and cleaned prior to welding. Only recommended chemicals can be used to clean the surface of the welded components, as inappropriate ones may adversely affect the strength of the weld. Another factor that influences the quality of welded joints, which must be taken into account by the welding personnel are the atmospheric conditions. Welded joints should be made at ambient temperatures between 0 and 30 °C. Humidity has also a great impact on the strength of welded joints. Therefore, under unfavorable conditions, such as rainfall, the place of welding should be covered by eg. a tent so that the moisture does not get into the welded connection. Another atmospheric factor that may adversely affect the strength of the welded joint is the wind. It can cause accelerated cooling of the plasticised surfaces of the welded joints.
Appropriate qualifications of the welding personnel are one of the key factors affecting the durability and safety of the pipeline. OIL AND GAS INSTITUTE - National Research Institute (INiG-PIB) has been providing training in this area for over 20 years. The welding personnel qualification is conducted according to the INiG-PIB program or the European standard EN 13067. The standard specifies the principles to be observed in the qualification of welding personnel, which include theoretical and practical examinations as well as destructive and non-destructive tests. A welder's qualification test certificate is issued on the basis of positive results of all the tests

Only fulfillment of all conditions influencing the strength of a pipeline, including the welding personnel competence, guarantees its long-term and safe operation.

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ПІДВИЩЕННЯ ЯКОСТІ КОНТРОЛЮ РІВНЯ БУРОВОГО РОЗЧИНУ В СВЕРДЛОВИНІ В ПРОЦЕСІ ПРОВЕДЕННЯ СПУСКО-ПІДІЙМАЛЬНИХ ОПЕРАЦІЙ

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Важливим чинником попередження газонафтопроявлень є контроль за рівнем бурового розчину у свердловині в процесі виконання спуско-підіймальних операцій. При підніманні бурильної колони свердловину необхідно доливати і водночас контролювати відповідність об'єму долитого бурового розчину об'єму металу піднятих труб. При спусканні трубної колони у свердловину аналогічно слід