DETECTION OF ACCIDENTAL LEAKS IN NATURAL GAS MAIN PIPELINES BY FUZZY LOGIC TOOLS

Adrian Bucur*, Vasile Rafa

SNTGN TRANSGAZ SA, 11 George Enescu Str., Mediaș, Sibiu, România

Abstract

Pipeline crack-like defects are detected and localized through the monitoring of the transport parameters of the transmission network. Under SCADA monitoring, accidental gas loss is reduced and the negative environmental impact of the hydrocarbons is avoided. This paper presents a method for the localization of accidental gas leaks, the pressure gradient method combined with a fuzzy analysis method, which operates simultaneously both numerical data and lexical arguments in order to accurately localize the damage in the field.

Key words: accidental loss, flow rate, fuzzy, natural gas, pressure gradient

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* Author to whom all correspondence should be addressed: E-mail: bucur.adrian@transgaz.ro; Phone: + 40269 801838; Fax: +40269 801802