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Gas Flow, Time, Distance Dynamic Modelling

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Abstract : The equations governing the distance, pressure- volume flow relationships for the pipeline transportation of gaseous mixtures, are considered. A derivation based on differential calculus, for an element of this system model, is addressed. Solutions, yielding the input- output response following pressure changes, are reviewed. The technical problems associated with these analytical results are identified. Procedures resolving these difficulties providing thereby an attractive, simple, analysis route are outlined. Computed responses, validating thereby calculated predictions, are presented.

Keywords : pressure, distance, flow, dissipation, models
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