Pseudo-Pressure ()

(1) $$\Psi(p) = 2 \int_0^p \frac{p\,dp}{\mu(p)\,Z(p)}$$

where

$\mu(p)$	dynamic fluid viscosity
$Z(p)$	fluid compressibility factor

It is widely used in Pressure Diffusion @model and transient data analysis (PTA / RTA) of strongly compressible fluids.

The name "Pseudo-Pressure" is misnomer as Pseudo-Pressure is not actually a pressure in terms of physical property and has a different dimension.

The value of Normalized Pseudo-Pressure differs from Pseudo-Pressure by a constant multiplier but represents an actually pressure in terms of physical property and has the same dimension.

See also

Physics / Mechanics / Continuum mechanics / Fluid Mechanics / Fluid Dynamics / Pressure Diffusion / Pressure Diffusion @model

Petroleum Industry / Upstream / Subsurface E&P Disciplines / Well Testing / Pressure Testing

[Normalized Pseudo-Pressure]