

liquid hydrogen

Schauburger

(2) "A [process](#) for the [liquefaction](#) of [gases](#) by the [Joule-Thomson effect](#). In this [process](#) devised by [Carl von Linde](#) (1842-1934) for [liquefying air](#), the [air](#) is [freed](#) of [carbon dioxide](#) and [water](#) and [compressed](#) to 150 atmospheres. The [compressed gas](#) is passed through a [copper coil](#) to an [expansion nozzle](#) within a [Dewar flask](#). The [emerging air](#) is [cooled](#) by the [Joule-Thomson effect](#) as it [expands](#) and then passes back within a second [copper coil](#) that surrounds the first [coil](#). Thus the [expanded gas cools](#) the incoming [gas](#) in a [process](#) that is said to be [regenerative](#). Eventually the [air](#) is [reduced](#) to its [critical temperature](#) and, at the [pressure](#) of 150 atmospheres (well above its [critical pressure](#)), [liquefies](#). The [process](#) is used for other [gases](#), especially **hydrogen** and [helium](#). **Hydrogen** has first to be [cooled](#) below its [inversion temperature](#) (see [Joule-Thomson effect](#)) using [liquid air](#); [helium](#) has first to be [cooled](#) below its [inversion temperature](#) using **liquid hydrogen**." [Collins Dictionary of Science. Oxford University Press, Great Britain, 1984, ISBN 0-19-211593-6.] — Ed [[The Energy Evolution - Harnessing Free Energy from Nature](#), [The Liquefaction of Coal by Means of Cold Flows](#)]

See Also

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