The Kinetic Energy Potential of Pressurized Natural Gas Wells

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Kinetic Energy Potential of High-Pressure High Flow-Rate Gas Wells for Producing MW's of Electricity

Computation of the ideal power produced by pressurized gas Methane (M=16 kg/kmol)

	High Pressure Gas Wells		
Enter Flowrate in Mcfd	**10,000**	**6,000**	**2,000**
Volumetric flow rate in cfs:	115.7	69.4	23.1
Enter Pressure in psig:	**7000**	**5000**	**3000**
Pressure ratio for expansion to 15 psig	0.0021	0.0030	0.0050

Three high-pressure, high flow rate natural gas wells of the magnitude of the well presented in Column One has the kinetic energy potential to generate as much power as a nuclear power plant that would cost billions of dollars to build!

Problems Associated with the use of Rotating Equipment in regard to Harnessing the Potential Energy of Natural Gas Wells are:

Centrifugal Forces try to Rip the Equipment Apart

End Thrust

Inability to Process Dual-Phase Working Fluids

Three components comprise the linear power equipment used to harness the kinetic energy of natural gas wells:

(1) a linear alternator that is driven back-and-forth by a pneumatic ram in order to generate 60 Hz AC electrical power; and, (2) a pneumatic ram prime mover, being a movable piston and rod within a cylinder that is actuated by a (3) driver that controls the flow of high-pressure natural gas into the cylinder of the ram and directs the exhaust flow from the cylinder.

Ram

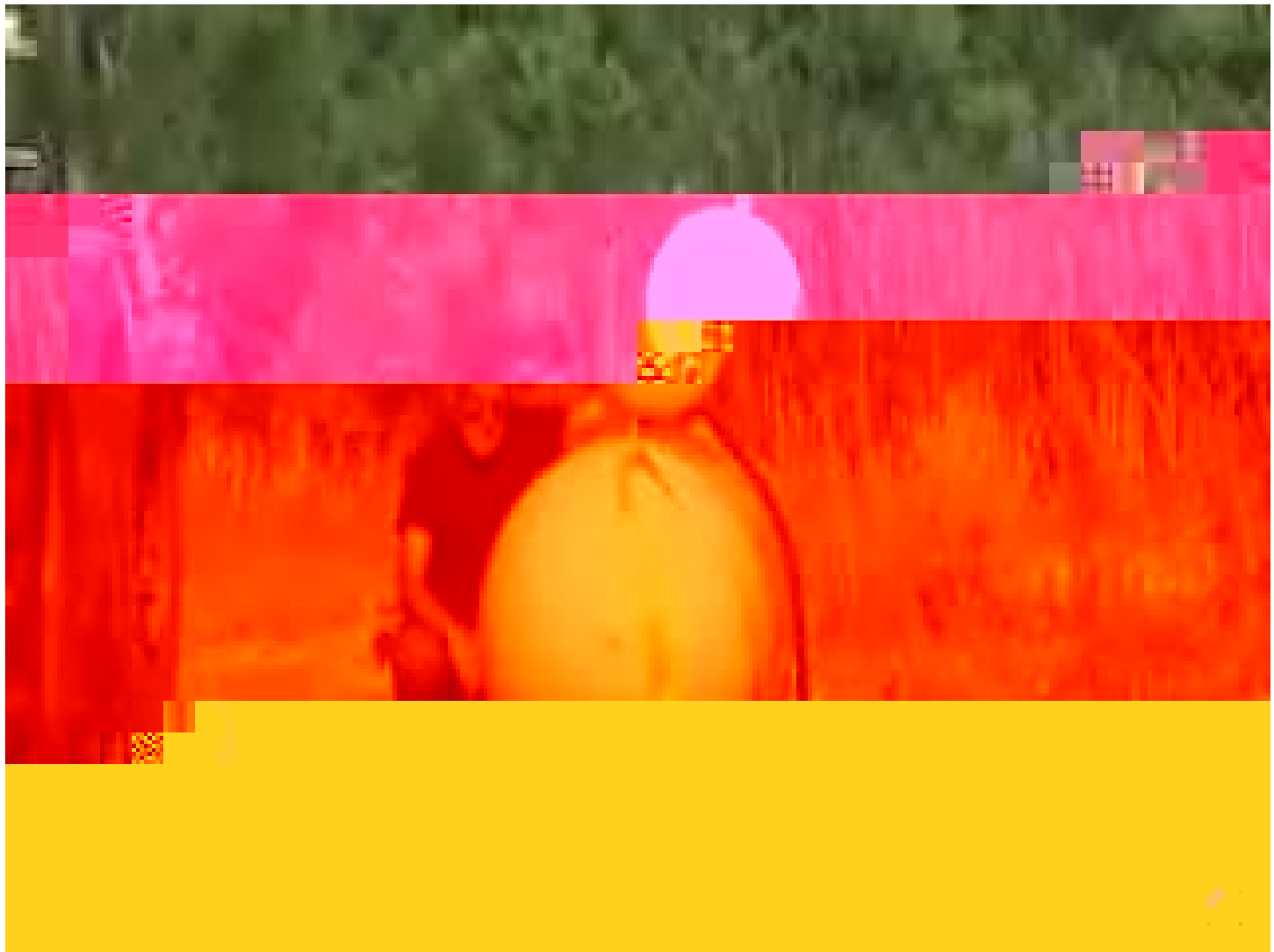
Driver

Linear Alternator

Movable Coil of Alternator

Unit Under Construction by Linear Power, Ltd.

Propane Gas-lift Kinetic Energy



Bench Test of Unit

Linear Power is Developing a wide range of Linear Power Equipment Capable of Harnessing Kinetic Energy Resources