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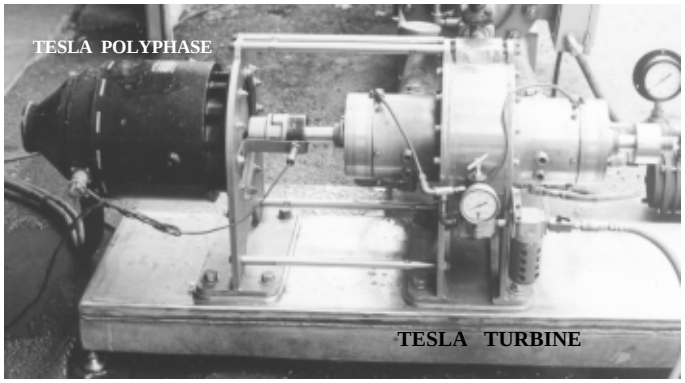
California Energy Commission Sponsors Successful Tesla Turbine Tests

Establishes Tesla Type is the Only Capable of Direct Biomass Conversion

Findings Bolster "Total Flow" Geothermal Claims

The question was asked; Can the Tesla turbine survive direct biomass combustion, as proponents of the technology have repeatedly declared. Claiming that it can survive, unimpeded, in the most difficult of service, including direct connection to salt brine geothermal sources. A conventional turbine would be destroyed, in short order, under such service.



To test these extraordinary claims, in the wake of the California "Energy Crisis" a $75,000 grant was awarded by the California Energy Commission, toward testing by the Energy & Environmental Research Center (EERC), at the University of North Dakota, Grand Forks.

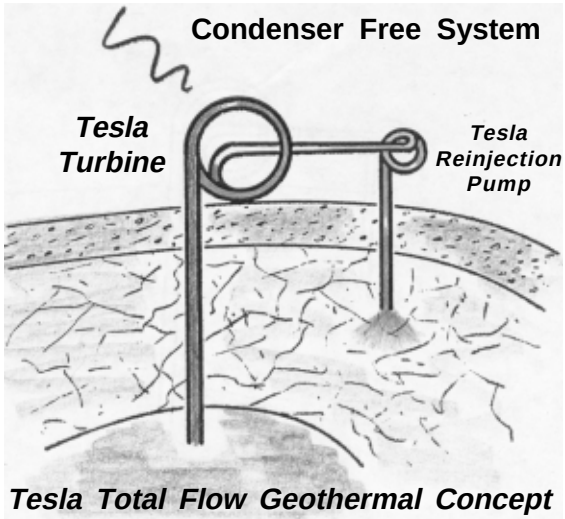
It was reported by the EERC that a Tesla type turbine was tested continuously for over forty hours, employing the direct combustion of oats. The Tesla turbine passed these tests, with flying colors, without any detectable damage or degradation, exactly as had been claimed. This type of operation would be completely impossible with a conventional turbine!

This test was, however, crude and under funded. The turbine being severely compromised, as it was not intended for this test but was the only turbine available for donation. The EERC never even joined TEBA or acquired any of the available documentation. The $75,000 was instead quickly consumed, apparently by administration and overhead. The test turbine was alternatively provided by TEBA member John Pickard, previous testing of which was featured in TEBA News #14. This turbine had matched Tesla's conversion efficiency, proven the highest documented of any turbine in its class. It was removed from its combined cycle boiler and sent to the EERC for test.

The EERC, however, lacked funds for a proper test stand, and sufficient applied pressure could not to be generated for application to the turbine. This prevented proper nozzle saturation and resultant velocity and restricted the turbine from achieving its rated operational speed. Making it impossible to accurately test conversion efficiency.

Efficiency can not simply be extrapolated from low speed operation, as proposed and submitted by the EERC testing. A little research would have quickly determined that the Tesla turbine has an extreme torque knee (90°), unlike a conventional bladed turbine (see TEBA News #19). Efficiency of the Tesla turbine has repeatedly been established, however, therefore reducing this testing to the important determination as to the turbine's ability to continuously ingest solids without damage.

It has now been proven, beyond any reasonable doubt, that the Tesla turbine can easily survive in service that would quickly destroy a conventional type. This effect has also been proven in current commercial Tesla type turbo pumping applications, having been declared a "Quantum Leap."



Tesla Total Flow Geothermal Concept

This ability, now established in the power turbine mode, should allow for the affordable conversion of abundant, clean, geothermal energy, without the environmental and technical disadvantages created by the use of conventional bladed turbines. It has been reported that the salt brine geothermal potential, of Southern California alone, is enough to power the entire Country, many, many times over. The Tesla *"Total Flow"* system clearly has the potential to revolutionize the established self destructive power production paradox. ⊙