Av-Intel USA. Cargo Airships – 40 Tons to 500 Tons Net Payload

Av-Intel represents fully patented airship technologies developed over the past 27 years. Our current cargo airship design is a result of R&D which was initiated with the original Magnus Aerospace (rotating sphere) airship. This design was contracted by The Strategic Defense Initiative Office (SDIO) in 1987 and was developed by Fred Ferguson who received prominent government and industry Awards for Excellence in Invention. In the 1990s, Mr. Ferguson's team continued development creating a more economically efficient, long fineness ratio Cargo Airship. More than $22 million in R&D, lead to newly awarded world-wide patents and a potential series of airships that can be proven as cost competitive in the global cargo transportation infrastructure.

Av-Intel is a private company with a group of prominent financiers from US industry. Av-Intel's research has shown that a modern long fineness ratio airship is substantially more load and cost efficient than equivalent-payload shorter blimp-like airships. However history has shown that all past long fineness ratio rigid airships had inherent structural inadequacies, many resulting in catastrophic failures. The Av-Intel series of airships has correctly analyzed and isolated the inadequacies of the past era and its design advances the state-of-the-art for ultra-large pressure airships. The result is a fineness ratio in excess of 8:1 which provides minimal cross section and minimal cost versus load capability.

The new Av-Intel airships encompass an advanced new patented technology that divides the long cigar-shaped airship into sections or segments, which absorb and compensate for overall structural stresses and bending moments. In simulation studies contracted to the Lockheed Advanced Development Corporation, Av-Intel's design proved to exceed the current requirements for safety and gust loading by a broad positive margin. Other contractual analysis included fineness ratio versus economics using the Texas A&M wind tunnel, structural envelope design evaluation with France's CNES, and with Froude scaled flying prototypes, the latest of which have been tested to 10,000-ft. altitude. Commercial Market studies were conducted by Federal Express and American President Lines. Based upon projected technical and economic performance features, these studies show Av-Intel's Cargo Airship efficiency and are conclusive regarding the "proof-of-concept" validation phase.

Further, the Av-Intel airship patents also include the correct positioning of propulsion for controlled low speed flight, and precision low speed crosswind maneuvers. The propulsion design includes off-the-shelf technologies and does not require new rotational or gear box systems. The first commercial prototype planned will have a 40-ton payload, is similar to the aerodynamic design and size of the historical US dirigible, "The Shenandoah", but with all structural inadequacies eliminated. The larger airship sizes as anticipated by the past FedEx-Lockheed assessment include net payloads up to 500 tons.

Av-Intel's patents define the overall core design and technology breakthrough that will realize an economical new transportation business using airships.