



## Special Projects

From the world leaders in the manufacture of aerostats, airships, air cell structures, gas balloons & tethered balloons



Breaking Records  
Custom Projects  
Space Missions



## CUSTOM PROJECTS

With unique production and testing facilities, Lindstrand Technologies has accomplished a series of global record-breaking projects and has developed products for outer space applications. Lindstrand Technologies has also developed innovative, efficient and cost effective solutions to deal with a variety of complex issues.

### Inflatable Tunnel Plug:

A structure which seals a tunnel in the event of fire, cutting off the flow of air to the fire and depriving it of the oxygen it needs to burn.

### Inflatable Flood Barriers:

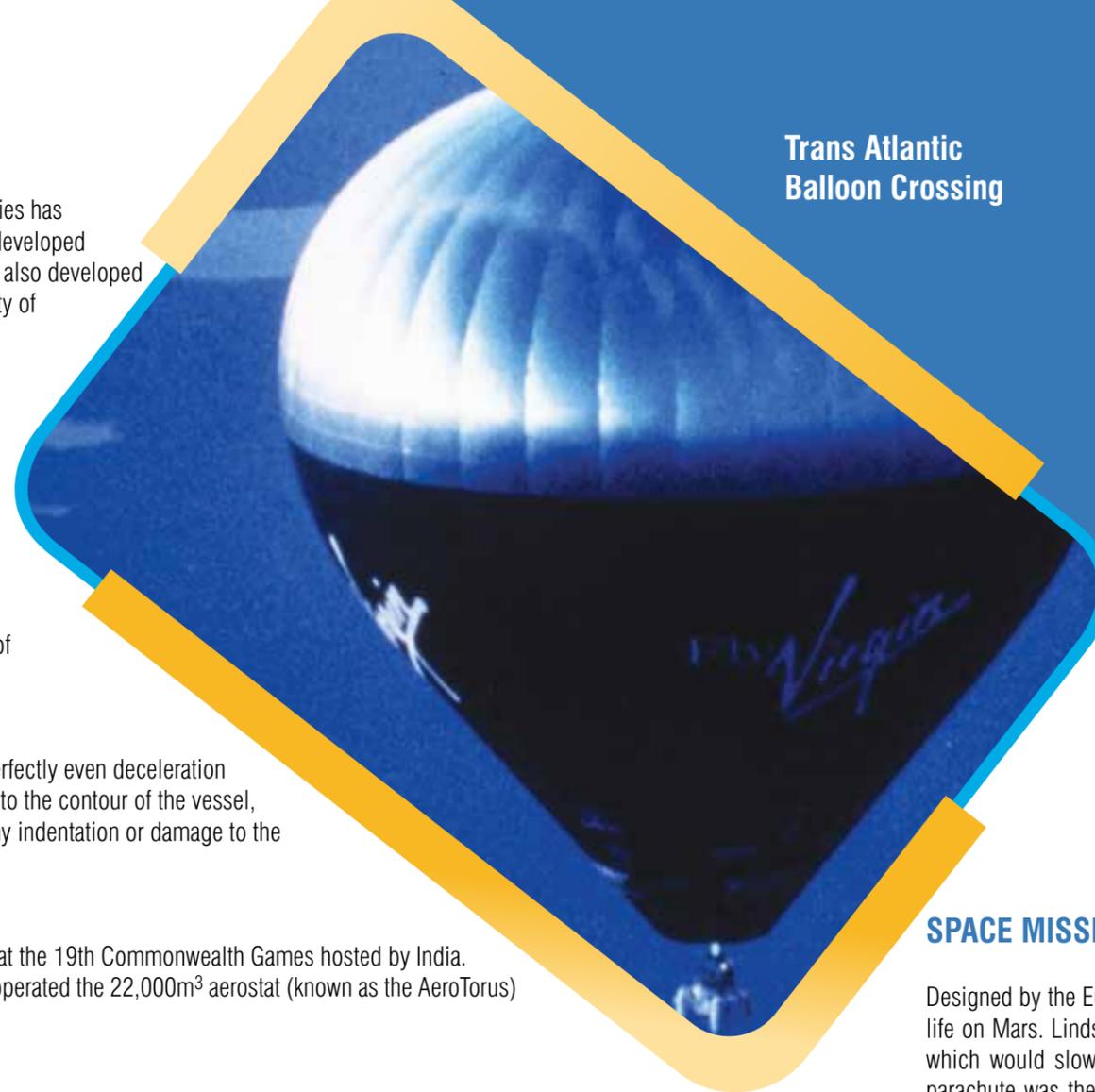
Which act as temporary walls and can be erected in minutes upon demand, and Self-Adjustable Flood Installations, which contour a building acting as a substitute to the old and complicated method of using sandbags against flooding.

### Inflatable Fenders:

The development of an intelligent fender which would produce a perfectly even deceleration of a vessel when it docked in port. This fender will adjust its shape to the contour of the vessel, spreading its load over the surface of the vessel, thus preventing any indentation or damage to the ship's hull.

### Custom Aerostats:

The largest tethered aerostat built to date formed the show stopper at the 19th Commonwealth Games hosted by India. Lindstrand Technologies Ltd designed, manufactured, inflated and operated the 22,000m<sup>3</sup> aerostat (known as the AeroTorus) during the Opening and Closing ceremonies of the Games in 2010.



Trans Atlantic Balloon Crossing

## BREAKING RECORDS

Teaming up with Richard Branson, Per Lindstrand made a bid to fly a hot air balloon across the Atlantic. His proposal for the Atlantic crossing was to fly high and fast in the JetStream from Maine, USA to the British Isles. The 75,000m<sup>3</sup> Virgin Atlantic Flyer took off from America on 2nd July 1987 and landed 4,920 kilometers away in Ireland 31 hours and 41 minutes later on 3rd July, travelling at an average speed of 97mph. These figures shattered the existing standard of long distance ballooning and set a whole new benchmark as well as proving Per's concept that a pressurized capsule could allow a massive balloon to fly high and fast into the JetStream where the sun provided thermal lift.

Having conquered the Atlantic in a hot air balloon in such a spectacular way, the next Richard and Per challenge would be crossing the Pacific which was twice the distance. Whilst the Atlantic crossing was in the summer, the Pacific had to be conquered in the winter due to the nature of the JetStream. The record was set between the 15th and 17th January 1991 in 46 hours and 15 minutes, travelling 10,817.60 kilometers.

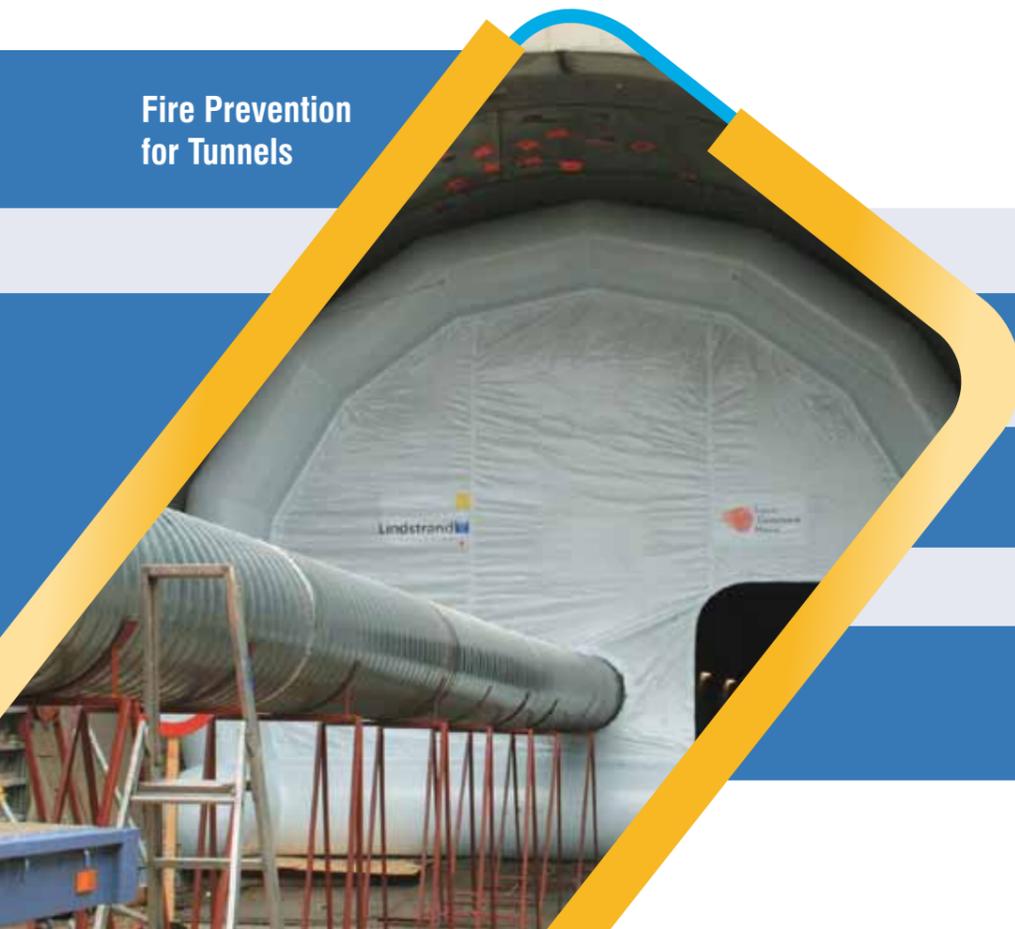
Only a few hours after landing the Pacific Flyer in Northern Canada, Richard and Per started to discuss a complete circumnavigation of the world in a balloon. The spring of 1995 saw the start of the Global Challenger series which ended on 25th December 1998 in Hawaii after the balloon ICO Global had flown 24,400 kilometers using the largest Rozier envelope built to date.

## SPACE MISSIONS

Designed by the European Space Agency, the Beagle 2 spacecraft was part of a project dedicated to finding life on Mars. Lindstrand Technologies won the contract to design, develop and manufacture the parachute, which would slow down the spacecraft from speeds of Mach 1.3 to a velocity of 17m/s. The Beagle 2 parachute was the most advanced parachute ever built and was launched into space on a Russian Soyuz rocket in June 2003 and subsequently landed on the surface of Mars on Christmas Day 2003.

In January 2006, the explorer spacecraft orbiting Mars sent back pictures showing that the parachute worked as intended, however, the Beagle 2 got jammed between two rocks, which fouled the solar panels

## Fire Prevention for Tunnels



## WORLD RECORD EVENTS:

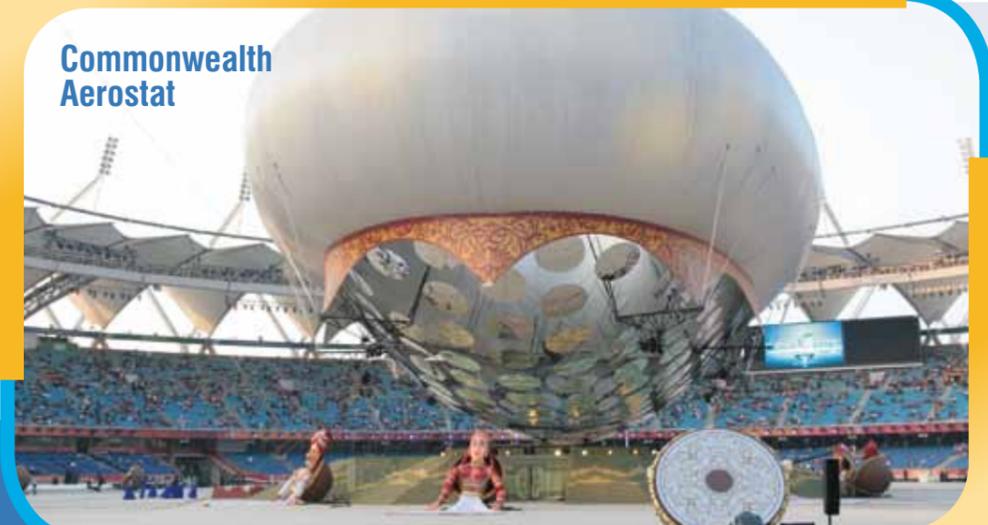
1987 - TRANS ATLANTIC CROSSING

1988 - HOT AIR BALLOON ALTITUDE RECORD

1991 - TRANS PACIFIC CROSSING

1995 to 1998 - GLOBAL CHALLENGER SERIES

## Commonwealth Aerostat





## Around the World Balloon

### COMPANY AWARDS

IFAI (*Industrial Fabrics Association International*)

#### AWARDS OF EXCELLENCE

2003 Alcan Loading Bay System, USA

2003 WDA 'Thought Bubbles', UK

#### OUTSTANDING ACHIEVEMENT AWARDS

2001 Magna Science Centre, UK

2006 Heathrow Bus Terminal Roof, UK

2007 AV Dome, Worldwide

2008 Inflatable Flood Barrier, USA

#### PERFORMANCE TEXTILES ASSOCIATION

2004 Winner of the Pertexa Industry Award and the Innovation Category

2005 Highly Commended - Innovation Category



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