



PYEONGCHANG 2018 WINTER OLYMPIC CEREMONIES



Extreme cold: Our crew successfully delivered a catenary based flying system for what turned out to be the coldest Games on record.

This was our seventh Olympic Games. Our track record for delivering ceremony engineering dates back to Athens in 2004 and takes in cablenets, track-based flying, stage engineering and smaller, automated set-pieces. Working for production company Cheil, we were tasked with providing a catenary based cablenet flying system, installing it in PyeongChang's purpose-built, open-air Olympic Stadium.

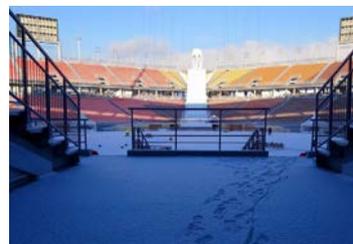
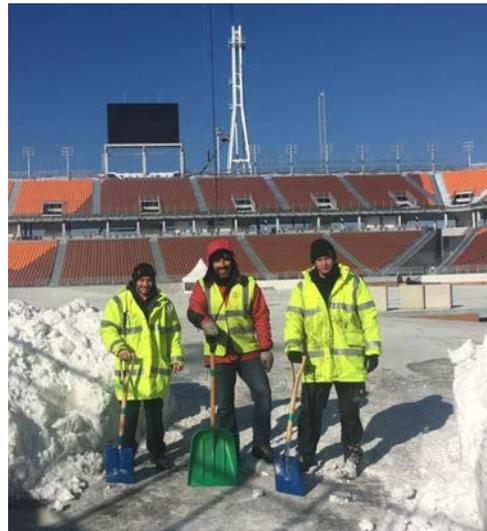




Winter challenges

Olympic ceremonies are amongst our most challenging projects. A combination of complex staging, technology, scenic treatments and a usually large cohort of volunteer participants is delivered live, in front of a global television audience. Many months of preparation culminate in a performance that has to deliver on the night. While ostensibly straightforward, the remit for PyeongChang presented its very own challenge however, in the shape of the extreme cold.

PyeongChang lies in the mountains towards the northern border of South Korea and has none of the temperate advantages of 2014's coastal location of Sochi. During the installation and rehearsal period in PyeongChang, temperatures hit minus 40 degrees Celsius overnight, making these the coldest Winter Olympics on record. Our crew of ten were on site from November and experienced the full force of the cold. Whilst working with proven technology, we had no experience of how this technology would perform at such low temperatures.

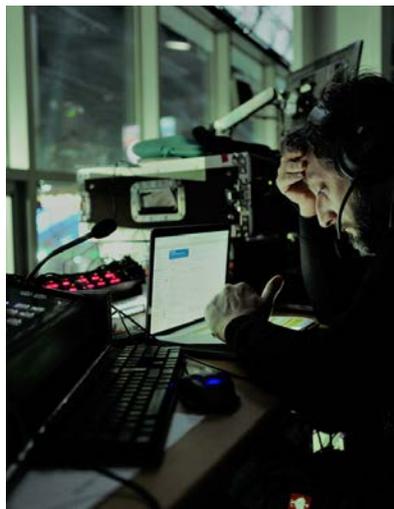


Flying system

The flying system comprised four catenary lines attached to four 60 metre towers located outside the perimeter of the stadium. These were rigged by our crew in extraordinarily cold conditions, exposed to the full force of wind chill 50 metres above the field of play. Handling metal components in such temperatures requires just as much caution as in extreme heat. Our crew experienced both extremes of the temperature scale in the space of a few months, installing a flying system in 40+ degrees of heat in Ashgabat earlier in the year. Progress in the cold of PyeongChang was methodical and work without gloves kept to a minimum.



Fourteen stock winches supplied the raise and lower of key scenic moments delivered from the hub above the field of play. Again, the exceptionally cold conditions necessitated a pragmatic response to protect our kit. We took the precaution of enclosing the winches in shipping containers that we insulated and fitted with internal heaters. These were located at the base of each tower, the winch cables feeding through neat apertures in the container walls, up and out across the stadium. Protected from freezing temperatures and the potential of ice, this helped recreate the more usual parameters for show operation.



Showtime

Our flying system was used for three of the four Olympic and Paralympic ceremonies, helping deliver a giant pyrotechnic effect for the Olympic Opening Ceremony and deploying the beautiful seven-storey tradition Korean roof for the Closing Ceremony. The Paralympic Opening Ceremony delivered the most complex sequence as segments of the giant 'Sphere of Co-existence' came together in mid-air and the three-tonne manned 'Para Boat' was lifted and flown above the field of play. The PyeongChang Olympic Organising Committee was keen to utilise the best of their home-grown talent and although experienced international ceremonies personnel were employed, this was generally in a consultancy capacity. Come showtime, however, Stage One were the only non-local production partner company in the control room, a great endorsement of our experience, technical knowledge and reputation as a safe pair of hands.