



STRUCTURAL STEEL

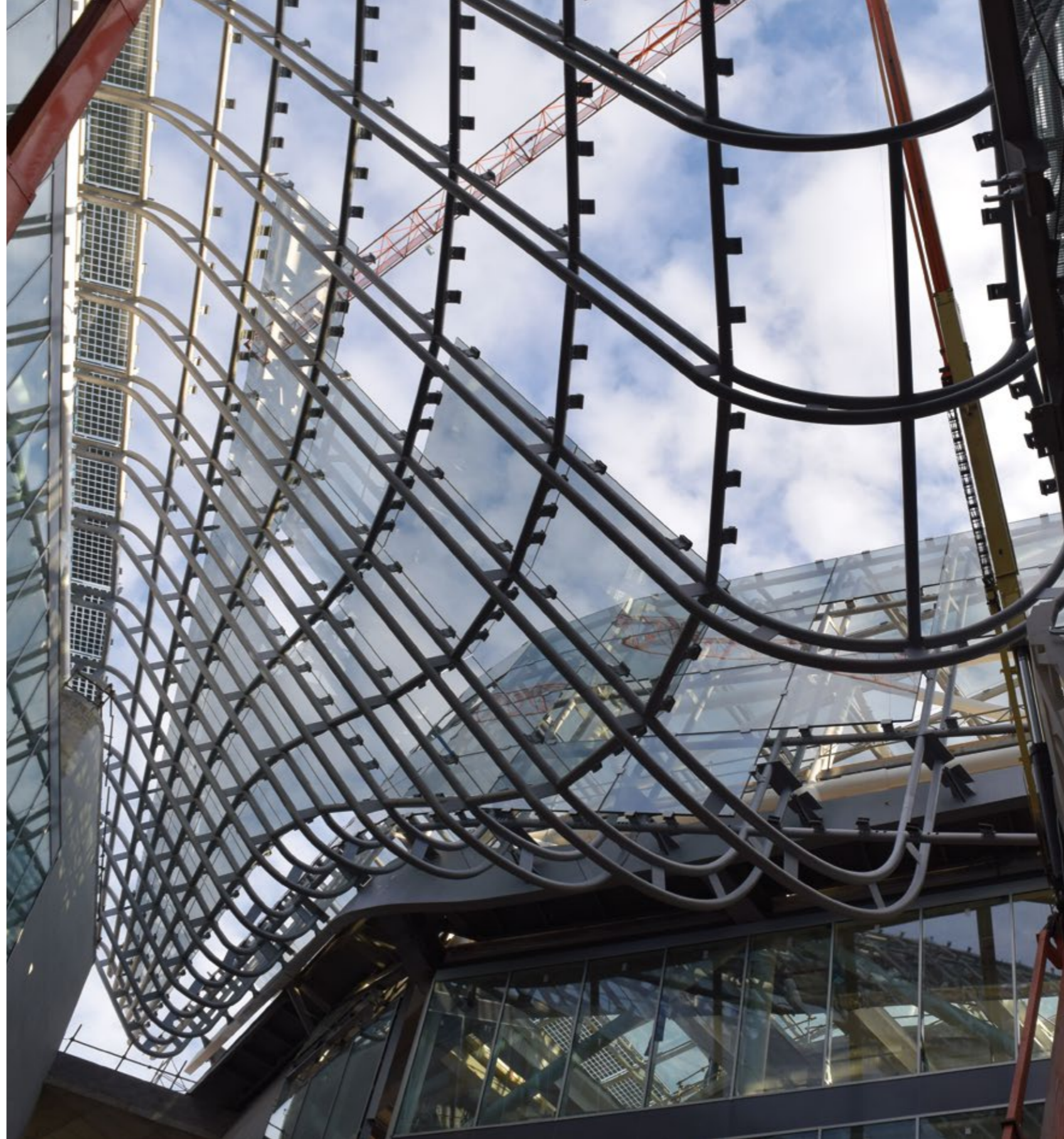
LASERTUBE IN EXPO 2015

36

The beauty, safety and sustainability offered by steel in modern architecture. How laser cutting has facilitated the use of tubular structures in Expo 2015.

Using steel in the structures erected for Expo Milan 2015 was the ideal solution because in this way the requirements set with reference to eco-friendliness and high energy efficiency were easily respected by exploiting the material properties of various steels used in mortarless structures.

Steel was used to construct 75% of structures. This percentage goes up to 90% in the pavilions built by foreign countries for this event. Drawing from the huge heritage in steel production and steel processing, the leaders of contemporary architecture created high-tech and above all sustainable buildings and infrastructures, converting constraints into opportunities thanks to the skills of metal structure experts. High structural strength and infinite architectural possibilities offered by steel, made it to be the ideal candidate to deal with the Expo 2015 efficiency challenge.



GLASS ROOF OF
PALAZZO ITALIA

350
TONS OF
LASER CUT,

*round steel tubes forming
the reticular support structure*

Highly accurate
cutting operations,
even on deformed or
rusty material

37

NEW HOLLAND
PAVILION

80
TONS

*Used for making an all-steel,
mortarless structure*

Complex laser cutting
operations on big
diameter tubes

Cutting of any type
of special profiles





EXPO GATE

140

TONS
OF STEEL

*Used in the fabrication of a structure
that uses various tubular profiles;
first laser cut and then assembled.*

Laser cutting
of large-size open
and/or special
profiles

VATICAN CITY
PAVILION

75
TONS

*Mortarless, welding-free load-bearing
steel structure assembled on-site*

42

Simplification of
subsequent assembly
and welding operations

Innovative and
perfect joints between
tubes of even different
cross-sections



43



44

45

THAILAND
PAVILION

300
TONS

Steel mesh structural core

Structures and frames
of any complexity