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spans in excess of 20 m can be achieved for the purposes of this article the definition of long span is taken as anything in excess of 12 m generally long spans result in flexible column free internal spaces reduce substructure costs and reduce steel erection times designing long span structures requires an obsession with stability certainly the structure has to hold up its own weight just to span the required distance a structure has to support significant dead load but the complexity of long span design increases exponentially when snow load wind load seismic load deflection serviceability and what is a long span structures having spans more than 20 meters are considered long span structures trusses folding plates shell structures frames tent structures and tensile structures are the most prevalent forms of long span structures long span buildings long span buildings create unobstructed column free spaces greater than 30 metres 100 feet for a variety of functions these include activities where visibility is important for large audiences auditoriums and covered stadiums where flexibility is important exhibition halls and certain types of manufacturing facility long span open web trusses provide architects with design freedom and engineers with a choice in material selection the trusses are custom designed detailed and manufactured to meet the structural needs and design intent for the specific application long span buildings that defy gravity in architecture span is the term given to the length of a structural component that extends between two supports or the continuous space created what we consider long span structures are structures with spans larger than 20 meters the most common types of long span structures are trusses folded plates shell structures frames and tent structures or tensile structures posted november 1 2022 a 266 foot clear span erection photo courtesy of thomas phoenix international long span trusses are 60 feet or greater in length fulfilling developers needs for wide open space long span trusses offer an efficient and economical way to support building roofs jon leach date published 9 april 2021 what do we mean by long span long span roofs are often associated with iconic projects be they stadia airports or other major public buildings nature long span by lawrence g griffi s p e the design and construction of long span roof structures requires a blend of skills from the structural engineer not normally required in more normal building types forces come into play including material shrinkage support settlement temperature effects and sequence of erection that can 1 tianjin binhai library is a long span structure that was completed in 2017 built in only three years it is located in tianjin china and was designed by architect rem koolhaas the library is part of a larger cultural complex that includes a museum theatres and an opera house cable structure form of long span structure that is subject to tension and uses suspension cables for support highly efficient cable structures include the suspension bridge the cable stayed roof and the bicycle wheel roof the dome of hagia sophia in istanbul built in 535 a d was the longest span roof in the world for approximately 1 000 years nowadays from the roof of at t stadium home of the dallas cowboys to pulkovo airport in st petersburg a new breed of long span structures is emerging the dome of hagia sophia in istanbul for a 100 100 square foot area your span this would be 10 psf dead load 40 psf live load 50 psf determine roof area to calculate the area of your sloped roof you ll use the pythagorean theorem span length 2 span width 2 roof length 2 in this case roof length 2 100 2 5 2 10 025 so roof length 100 12 feet long span is defined by the width of the building and the span of the roof frame across the entire structure anything more than 20 meters is considered a long span but for legacy that s on the low side these wide open structures are also known as clear span or free span buildings long span roofs are similar to other roofs in terms of function they protect structures from weather elements and provide insulation when necessary however they are longer than traditional roofs as they exceed 12 m in span these roofs are often made of steel timber and concrete long span roofs are also referred to as roofs that exceed a 12 m span long span roofs can produce resilient column free interior areas they can also decrease substructure expenses and production times long span roofs are usually observed in a broad variety of building varieties such as manufacturing plants warehouses agricultural structures long span bridges often exposed to challenging harsh natural environments with severe weather conditions necessitate real time examination of load deformation characteristics to ensure structural integrity and safety what is long span pipe and how does it work ductile long span pipe is comprised of multiple length pipe segments utilizing a specially designed flange joint connection with an o ring rubber seal made of nitrile buna n material for minimizing the number of piers or hangers required in elevated lines such as pipe on supports and other crossings apo longspan color roofing apo galfan longspan color roofing we manufacture deliver install and support your

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long span buildings long span buildings create unobstructed column free spaces greater than 30 metres 100 feet for a variety of functions these include activities where visibility is important for large audiences auditoriums and covered stadiums where flexibility is important exhibition halls and certain types of manufacturing facility

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long span open web trusses provide architects with design freedom and engineers with a choice in material selection the trusses are custom designed detailed and manufactured to meet the structural needs and design intent for the specific application

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long span buildings that defy gravity in architecture span is the term given to the length of a structural component that extends between two supports or the continuous space created

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what we consider long span structures are structures with spans larger than 20 meters the most common types of

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cable structure form of long span structure that is subject to tension and uses suspension cables for support highly efficient cable structures include the suspension bridge the cable stayed roof and the bicycle wheel roof

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the dome of hagia sophia in istanbul built in 535 a d was the longest span roof in the world for approximately 1 000 years nowadays from the roof of at t stadium home of the dallas cowboys to pulkovo airport in st petersburg a new breed of long span structures is emerging the dome of hagia sophia in istanbul

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long span bridges often exposed to challenging harsh natural environments with severe weather conditions necessitate real time examination of load deformation characteristics to ensure structural integrity and safety

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what is long span pipe and how does it work ductile long span pipe is comprised of multiple length pipe segments utilizing a specially designed flange joint connection with an o ring rubber seal made of nitrile buna n material for minimizing the number of piers or hangers required in elevated lines such as pipe on supports and other crossings

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