reichstag dome
sir norman foster
nineteen ninetynine
brooke corey, pamela da graca, megan gaydou, amanda geserick, bradley keene, douglas mullen
– 1894: Original building by Paul Wallot
– 1933: “Terrorist arson”
– WWII: Further damaged by bombs
– 1960’s: Paul Baumgarten plastered over damage and converted it into a convention centre
– 1992: Design competition
– 1999: Reichstag reopens as seat of Bundestag
- Importance of the Bundestag as a democratic forum
- Maximize public accessibility to the workings of government
- Sensitivity to the importance of history
- Rigorous environmental sustainability
- Prevailing western winds are drawn into the building and transferred through the chamber floor (reducing drafts and noise); warm air rises through the cone.

- Winter heating via under floor system of pipes with hot water.

- Summer cooling provided by chilled ceilings; ventilation controlled by operable windows.

- Great thermal mass of building provides passive form of temperature control.

- 100 solar modules with pv cells generate 40 kW; enough to power rotating shading device in cupola; indirect light is then reflected by mirrored cone into interior chamber.
-ground-level power plant provides energy to other parliamentary areas
-heating and cooling plant powered by vegetable oil derived from date palms and sunflower seeds (as efficient as tradition fuel, but 94% decrease in CO$_2$ emissions)
-heat produced by plant is stored in natural aquifers; hot water is used for heating during the winter
-chilled water is stored and pumped through ceilings during summer
step one: construct scaffolding

: construction
step two: construct interior walkways
step three: construct outer ribs of dome
step four: construct horizontal rings of dome
step five: construct “cone” hanging from ribs
load analyses
dead load
: wind load
load tracing
obvious structure
air-extraction plant

structural details
faceted glazing of two laminated sheets of glass, secured with extruded aluminum bars
detailed mirror assembly; each pivots individually.
section through cone at viewing-platform level

:structural details
section through cone at chamber-soffit level & cone bracing

:s t r u c t u r a l d e t a i l s
sun-shade connection detail

structural details
section through inclined glass at floor levels
Dead Loads: questions
sources:


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