

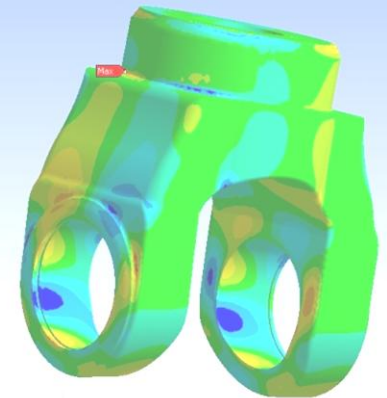
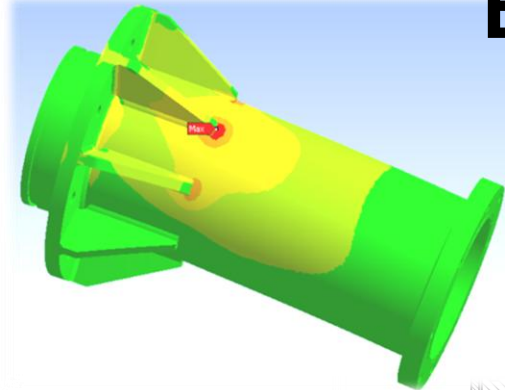


Konstruktion der Kugelaufhängung für die Energiezentrale im deutschen Pavillon für die EXPO 2010 in Shanghai

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Dr.-Ing. Anna Krolo

Dipl.-Ing. Benjamin Klein

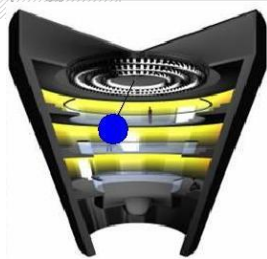
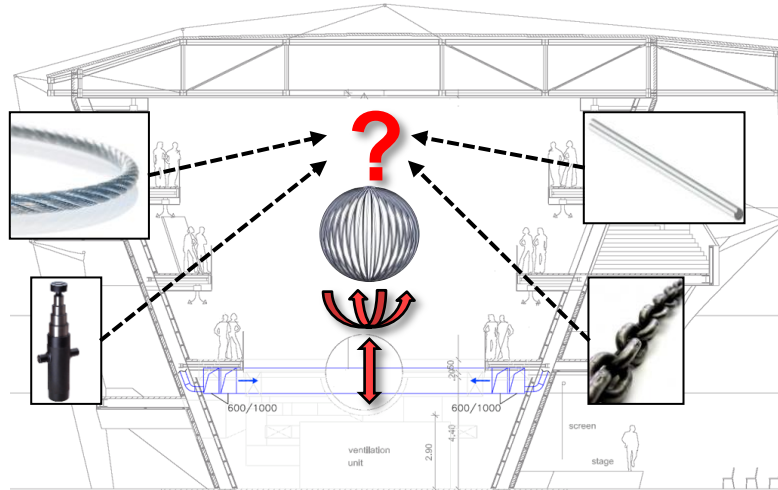




Aufgabe

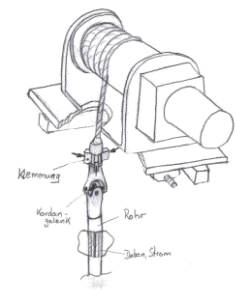
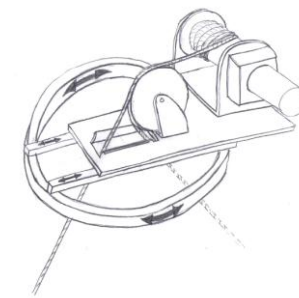
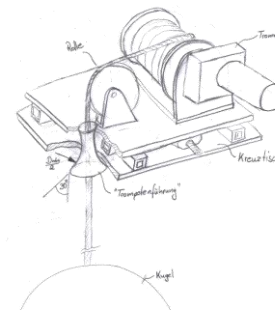
Konstruktion der Kugelaufhängung für die Energiezentrale des deutschen Pavillons

Einbausituation



Konzeptauswahl

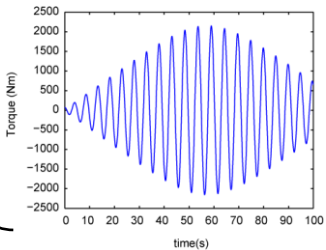
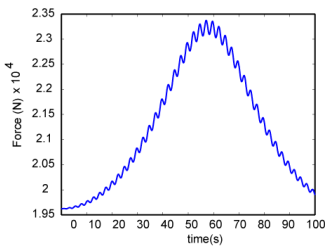
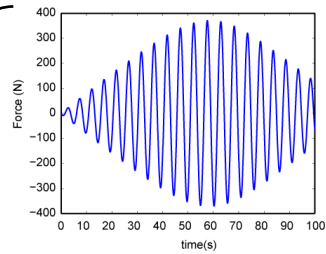
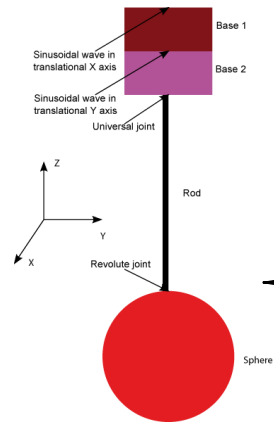
	1.	2.	3.	4.
function				
1. Aufhängeelement				
2. Hubmethode				
3. Anordnung				
Für Seil: 4. Ablenkung				



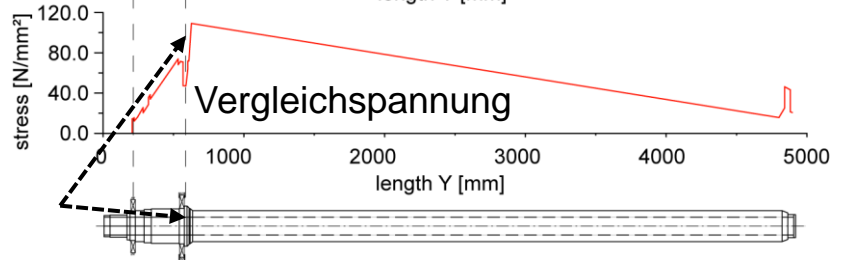
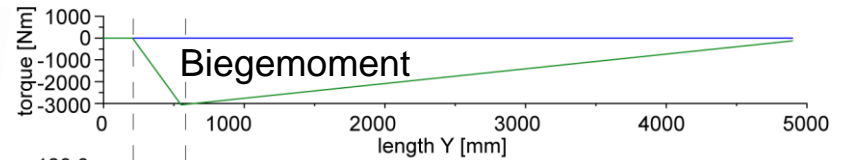
Berechnungen

Kräfte und Momente

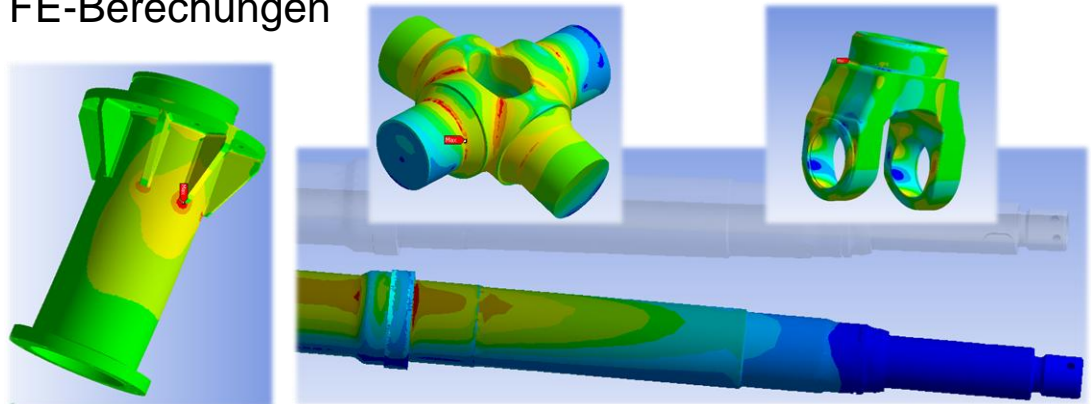
ITM
multibody model



Beanspruchungen

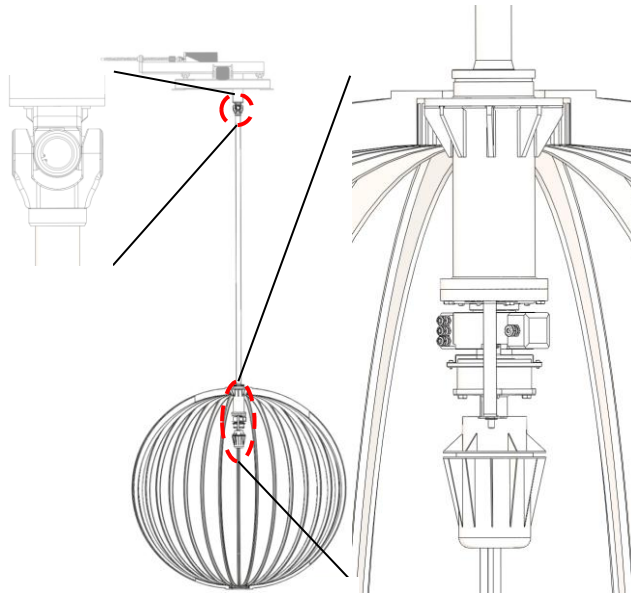
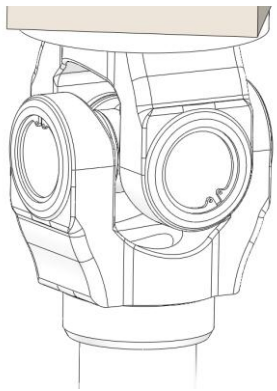


FE-Berechnungen

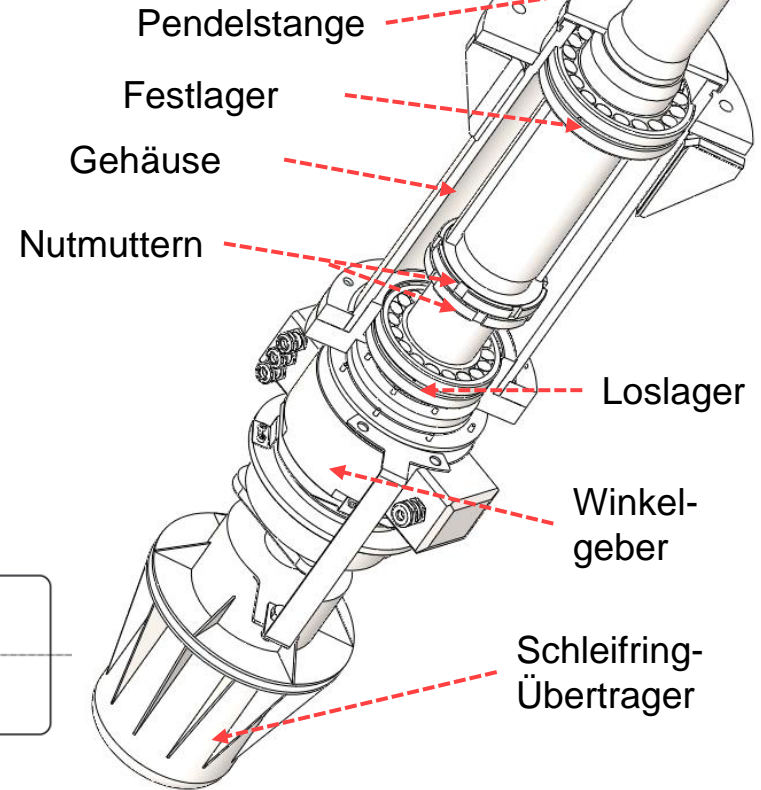


Konstruktion

Gelenk



Kugelaufhängung



Pendelstange

Festlager

Gehäuse

Nutmuttern

Loslager

Winkel-
geber

Schleifring-
Übertrager

