A SET OF TECHNICAL DRAWINGS OF THE PASSENGER AIRSHIP HINDENBURG

SCALE IS 1/200 EXCEPT AS OTHERWISE NOTED

DRAWINGS BY DAVID FOWLER
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Original Lower Fin Outline

Modified Lower Fin Outline (after damage 26 March 1936)

Gas Cell No.

Frame No.

0 2 3.5 20 33.5 47 62 77

The Hindenburg
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FRONT ELEVATION
The Hindenburg
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"B" Deck Passenger Cabins (Added 1937)

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**Control Gondola**

- Elevator Wheel
- Ballast Board
- Navigator’s Station
- Rudder Wheel
- Gas Cell Board
- Engine Telegraph
- Ladder to Hull
- Ring 203
- Landing Rail
- Pneumatic Landing Wheel

**Engine Car (Forward)**

- 4 Engine Cars
- Forward Engine Cars mounted 4° outward from ship’s axis
- Aft Engine Cars mounted at 3° outward from ship’s axis

**Engine specifications:**

- Daimler Benz LOF 6 diesel
- V16, 4 valve per cylinder
- 770 kW (1050 hp) maximum at 1500 rpm
- 690 kW (940 hp) cruising at 1350 rpm
- 225 g/kWh (0.37 lbs./hp/h) fuel consumption (cruising)

- Propeller diameter: 6.0 meters (19.7 feet)
- Propeller rpm (cruising): 625 rpm
- Maximum air speed: 137 kph (85 mph)
- Cruising air speed: 120 kph (75 mph)
Control Gondola (Detail)

- Drift Measurement Device
- Gas Valve Control Board
- Barometric Altimeter
- Inclinometer
- Ballast Control Board
- Gyroscopic Compass
- Rudder Wheel
- Elevator Wheel
- Observation Room
- Navigation Room
- Control Room
- Telephone Switchboard
- Gas Valve Control Board
- Engine Telegraph
- Gyroscopic Compass
- Engine Telegraph

Scale 1/50

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The Hindenburg
4 Engine Cars
Forward Engine Cars mounted 4° outward from ship's axis
Aft Engine Cars mounted at 3° outward from ship's axis

Engine specifications:
Daimler Benz LOF 6 diesel
V16, 4 valve per cylinder
770 kW (1050 hp) maximum at 1500 rpm
690 kW (940 hp) cruising at 1350 rpm
225 g/kWh (0.37 lbs./hp/h) fuel consumption (cruising)

Two 2-blade propellers fixed together to create one 4-blade propeller
Propeller diameter: 6.0 meters (19.7 feet)
Propeller maximum tip velocity 848 kph (527 mph)
Propeller rpm (cruising): 675 rpm
Maximum air speed: 137 kph (85 mph)
Cruising air speed: 120 kph (75 mph)
Main Rings

3.5

Tail Fin Cruciform Structure

Bracing Cable (40,000 pound)

Hull Fabric Covering

Feet 0 10 20 30 40 50
Meters 0 5 10 15
Main Rings

Gas Vent
Keel Corridor
Ladder Shaft to Axial Corridor
Bulkhead Bracing Wires
Axial Corridor
Maneuvering Valve
Pressure Relief Valve

Hull Fabric Covering

Feet

Meters
MAIN RINGS

Bulkhead Bracing Wires

Hull Fabric Covering

Axial Corridor

Keel Corridor

"Stub" Keel for Engine Car Access

Access Ways to Engine Cars

Engine Car 3

Engine Car 4

Bridge

0 10 20 30 40 50

FEET

METERS 0 5 10 15

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The Hindenburg
**Main Rings**

- Hull Fabric Covering
- Main Rings
- Gas Vent
- Ventilation Shaft
- Pressure Relief Valve
- Maneuvering Valve
- Keel Corridor
- Bulkhead Bracing Wires
- Axial Corridor

"Stub" Keel for Engine Car Access

The Hindenburg

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Intermediate Rings

- **Gas Cell (made from “Goldbeater’s Skin”)**
  - Tube through Gas Cell for Axial Corridor

- **Axial Corridor**
- **Keel Corridor**
- **Passenger “A” Deck**
- **Passenger “B” Deck**

Intermediate Rings 237 and 241 are 18 sided. Longitudinal girders create 36 apices.

Ring 198 is a typical Intermediate Ring.

- **Fabric Hull Cover**
- **Hull Fabric Covering**

Feet

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<th>30</th>
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Meters

| 0 | 5  | 10 | 15 |
Bow Mooring Area (Detail)

- Hull Fabric Covering
- Observation Hatch
- Observation Platform
- Ladder
- Axial Corridor
- Mooring Platform
- Guy Rope Platform
- Keel Corridor
- Observation Bench
- Guy Ropes

Scale 1/100

Feet
0 5 10 15 20 25 30

Meters
0 5 10
**TAIL STRUCTURE**

Main Ring construction of the Tail Fins is braced through the hull to the opposing Fin by the Tail Fin Cruciform Structure.

Main Ribs constructed using triangular girders; Intermediate ribs constructed using flat girders.
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The Hindenburg
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Axial Corridor*

* the axial corridor extends the length of the airship, but is omitted for clarity where it would obscure other details.
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Explanation of Letters on Longitudinal Cross Section and Plan Views

- **a₁**: Fuel Oil Barrels (2,500 liters) (28)
- **a₂**: Fuel Oil Valve Barrels (2,500 liters) (4)
- **a₃**: Fuel Oil Operation Barrels (800 liters) (4)
- **a₄**: Fuel Oil Barrels (1,250 liters) (4)
- **a₅**: Fuel Oil Barrels (850 liters) (2)
- **b₁**: Lubrication Oil Barrels (800 liters) (6)
- **b₂**: Lubrication Oil Barrels (380 liters) (4)
- **b₃**: Drinking Water Barrels (2,500 liters) (2)
- **b₄**: (elevated to maintain faucet pressure)
- **c₁**: Passenger Drinking Water Barrels (200 liters) (2)
- **d₁**: Fresh Water Barrels (2,500 liters) (2)
- **e₁**: Fresh Water Barrels (2,500 liters) (2)
- **f₁**: Barrels for Recovered Ballast Water (2,500 liters) (9)
- **f₂**: Barrels for Recovered Ballast Water (2,000 liters) (2)
- **g₁**: Double Ballast Bags (500 liters) (4)
- **h₁**: Cooling Water Barrels (400 liters) (4)
- **i₁**: Baggage Room (500 kg) (2)
- **i₂**: Spare Parts Storage Room (500 kg) (2)
- **i₃**: Food Storage Room (500 kg) (2)
- **i₄**: Food Storage Room (250 kg) (2)
- **n₁**: Engineer’s Room
- **o₁**: Exhaust
- **p₁**: Waterway and Toilet
- **q₁**: Workshop
- **r₁**: Access Way to Engine Cars (4)
- **s₁**: Access Ways to Ballast Bags (4)
- **t₁**: Maneuvering Valve (14)
- **u₁**: Pressure Relief Valve (14)
- **v₁**: Gas Shaft (7)
- **w₁**: Ventilation Shaft (3)
- **x₁**: Ladder Shafts (3)
- **y₁**: Anchor Cones (2)