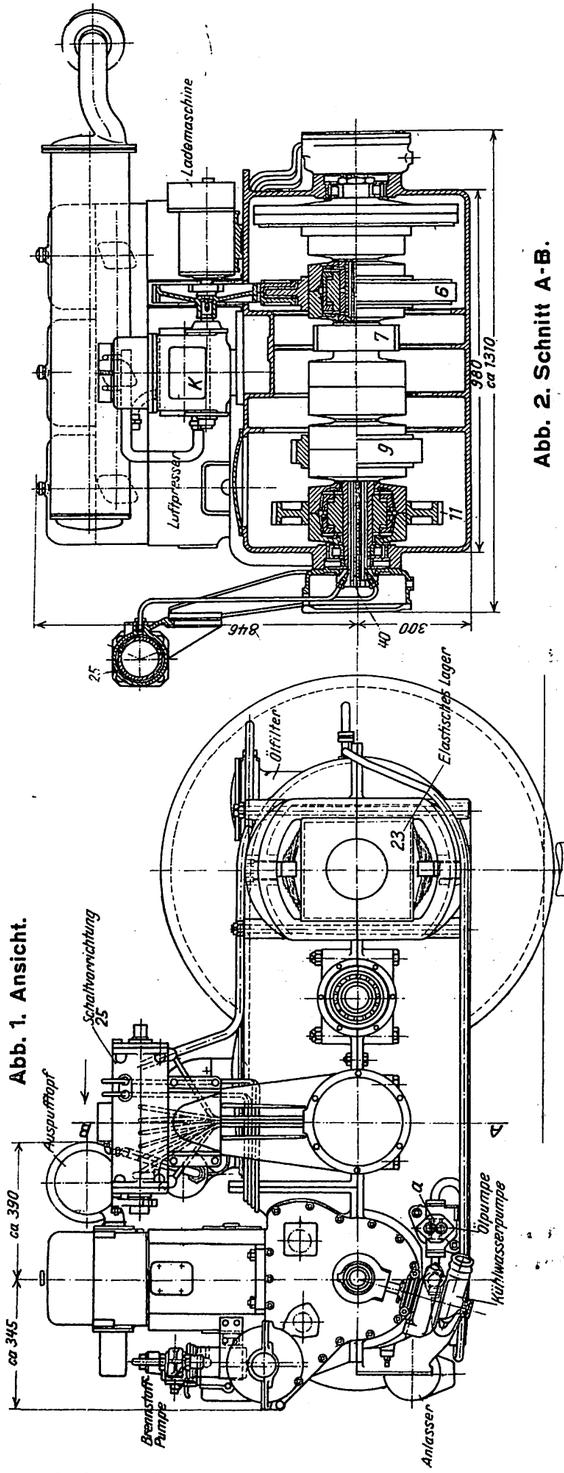


Abb. 2. Schnitt A-B.

Abb. 1. Ansicht.

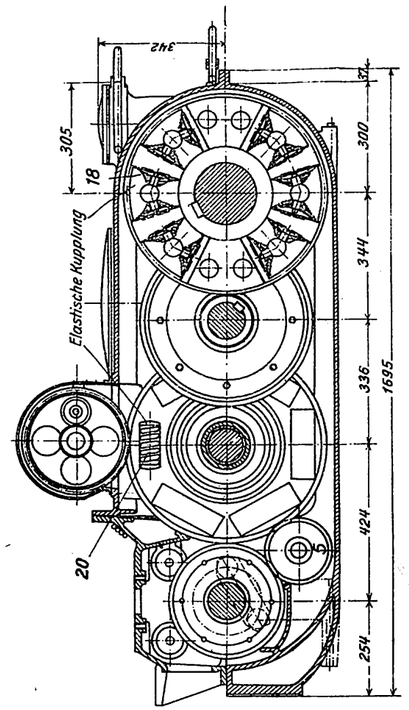


Abb. 4. Schnitt G-H.

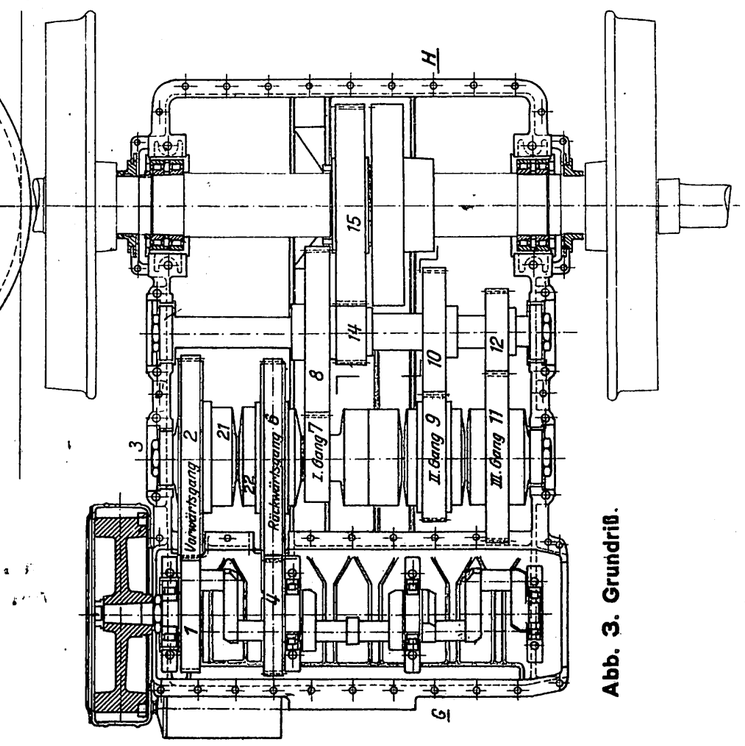


Abb. 3. Grundriß.

Abb. 1. bis 4. Motor mit Getriebe.

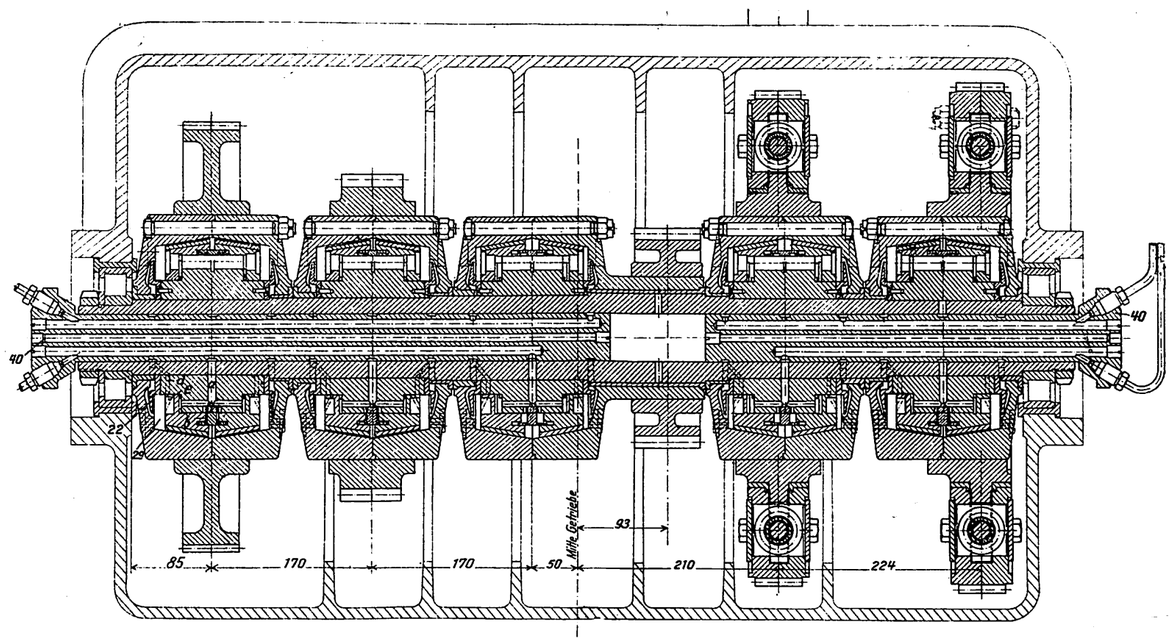


Abb. 5. Welle mit den Kupplungen.

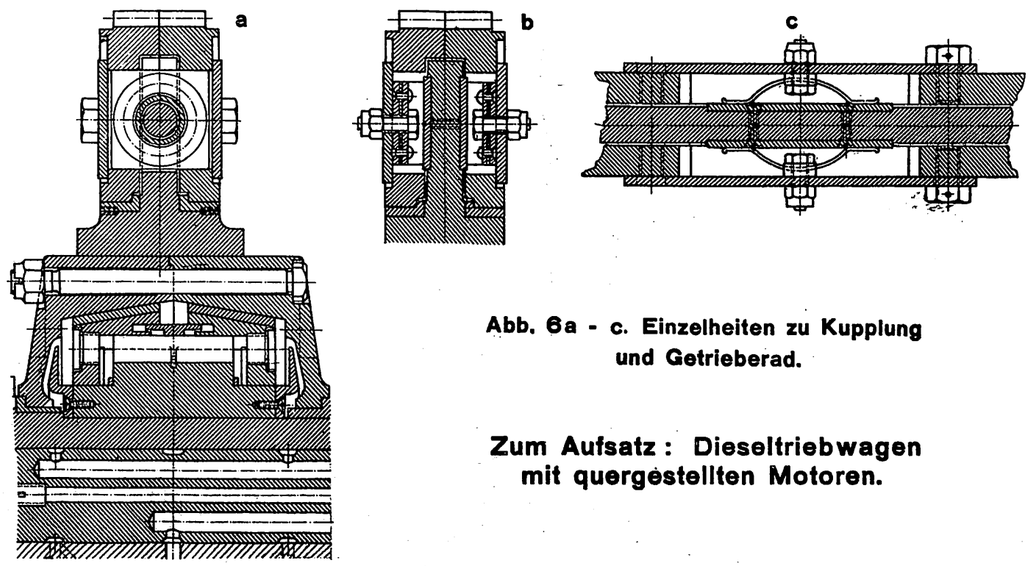


Abb. 6a - c. Einzelheiten zu Kupplung und Getrieberad.

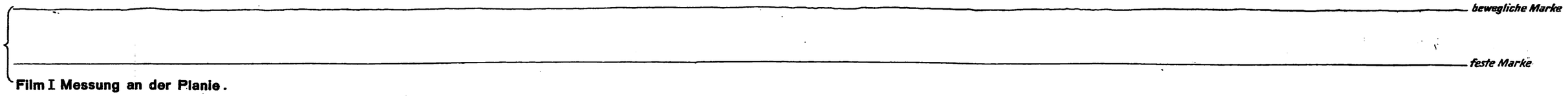
Zum Aufsatz: Dieseltriebwagen mit quergestellten Motoren.

Verlag von Julius Springer, Berlin.

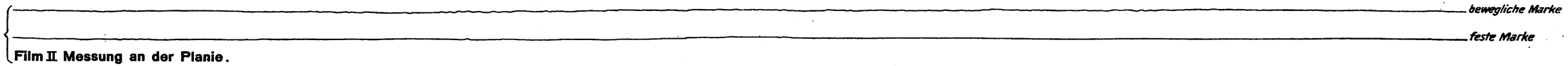
Lith. Anst. v. F. Wirtz, Darmstadt.

Zum Aufsatz: Schwingungen im Oberbau.

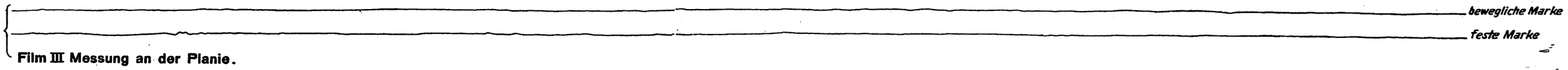
→ Bewegungsrichtung der Züge.



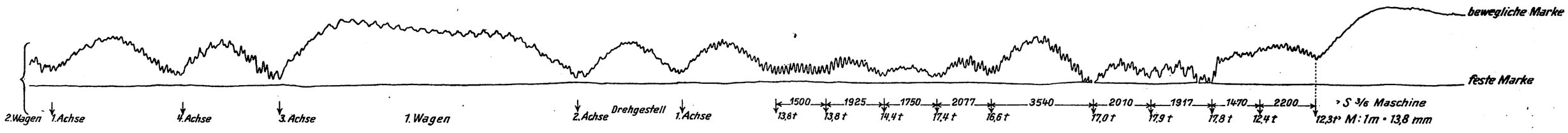
Film I Messung an der Planie.



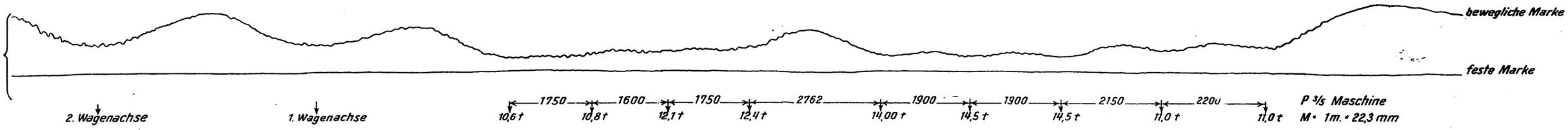
Film II Messung an der Planie.



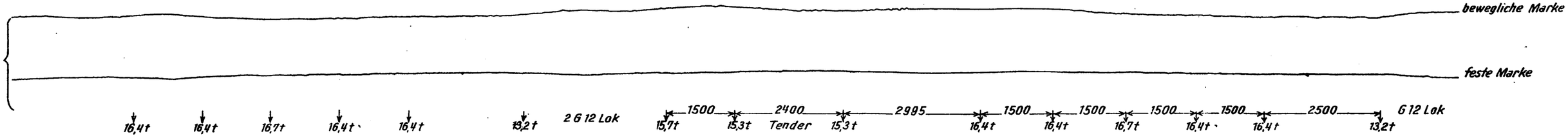
Film III Messung an der Planie.



Film IV Durchbiegungsmessung an der Schiene unter einem D Zug bei 75 km/Std.



Film V Messung der Einsenkung der Schwellen.



Film VI Messung der Einsenkung des Schotters.

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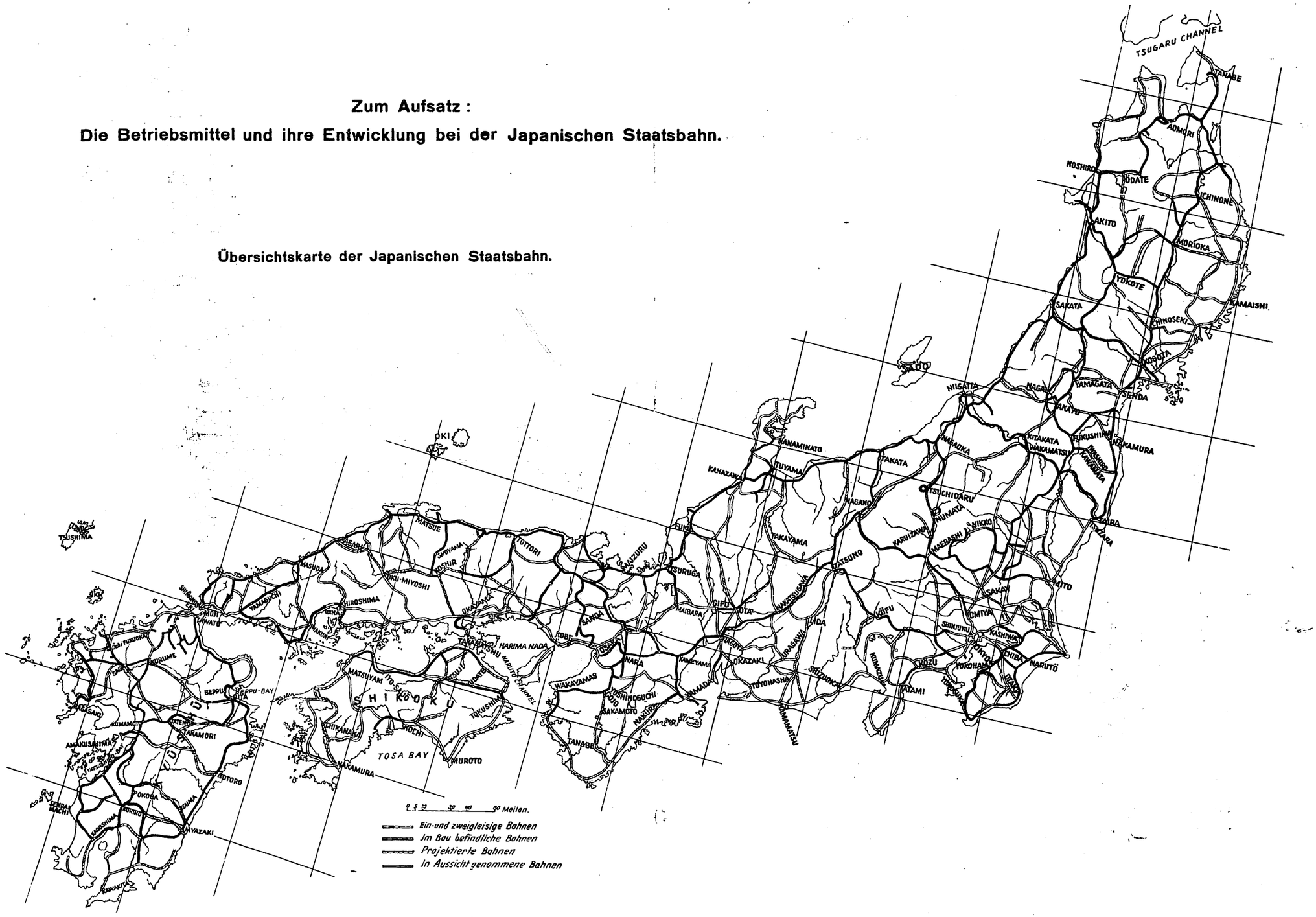
Lith. Anst. v F. Wirtz, Darmstadt.

Zum Aufsatz:

Die Betriebsmittel und ihre Entwicklung bei der Japanischen Staatsbahn.

Übersichtskarte der Japanischen Staatsbahn.

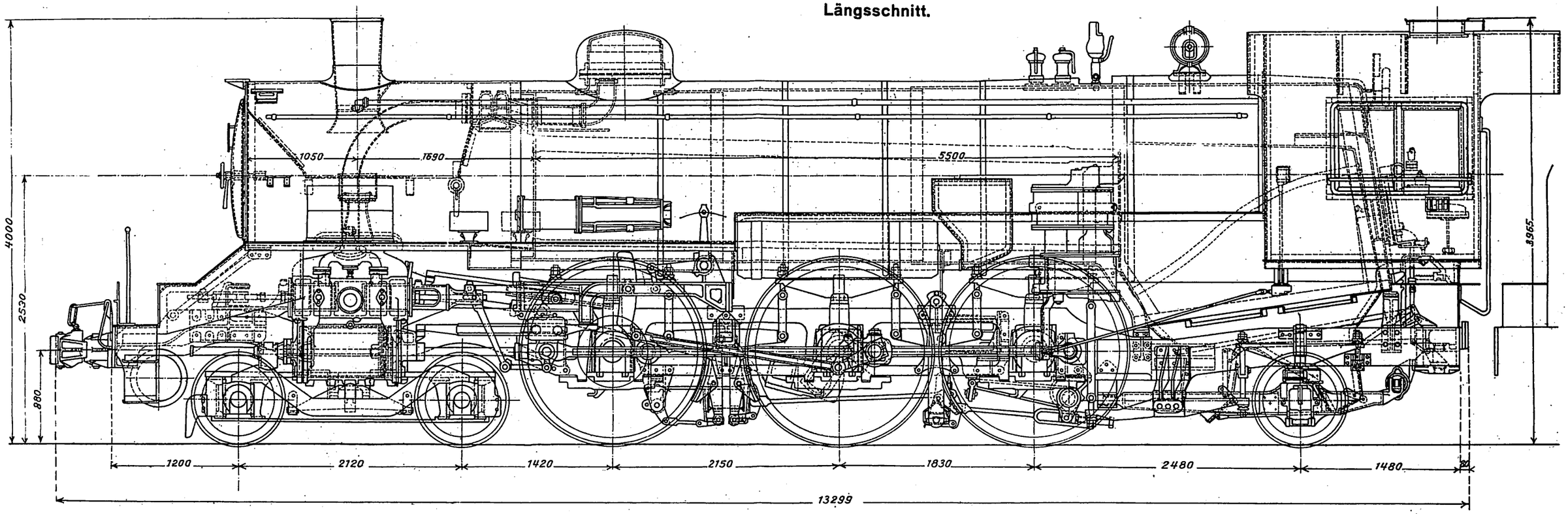


Verlag von Julius Springer, Berlin.

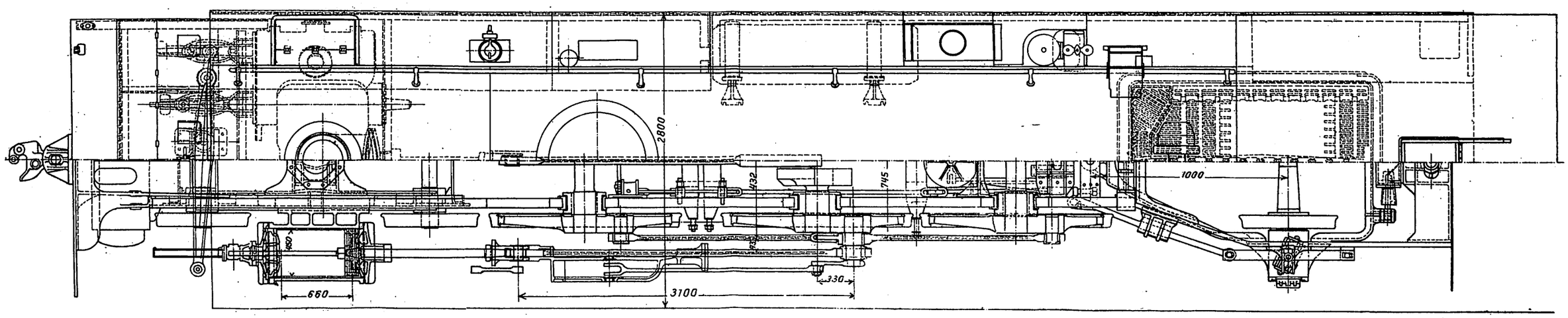
Lith. Anst. v. F. Wirtz, Darmstadt.

Lokomotive C 53 der Japanischen Staatsbahn, Maßstab 1 : 40

Längsschnitt.



Grundriß.

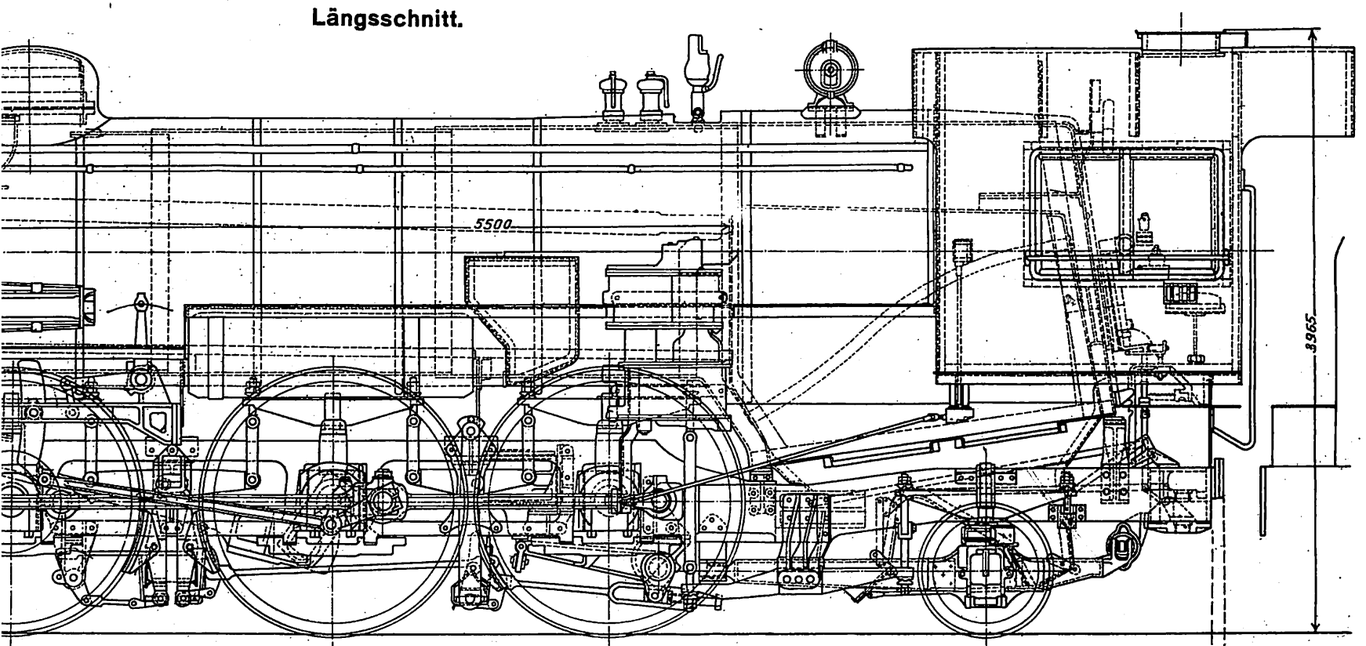


Zum Aufsatz : Die Betriebsmittel und ihre Entwicklung bei der Japanischen Staatsbahn.

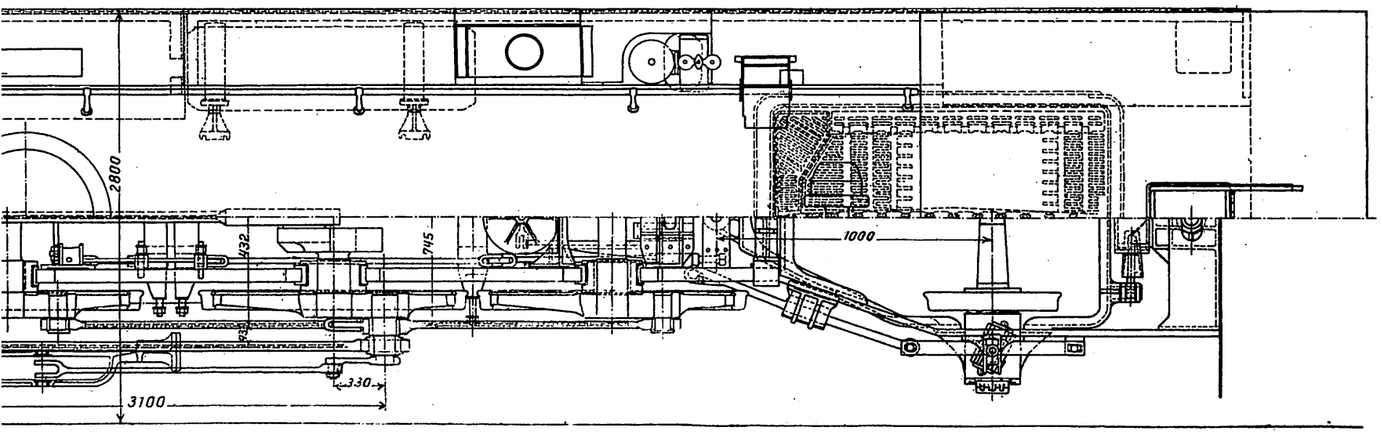
Verlag von Julius Springer, Berlin.

Lokomotive C 53 der Japanischen Staatsbahn, Maßstab 1 : 40

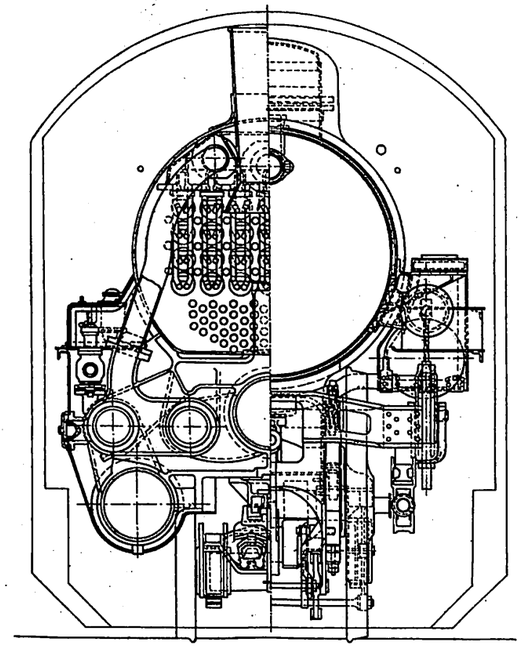
Längsschnitt.



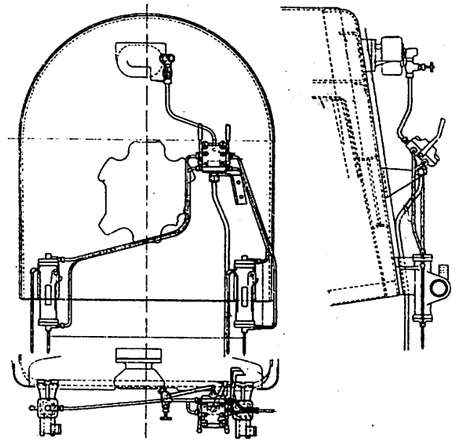
Grundriß.



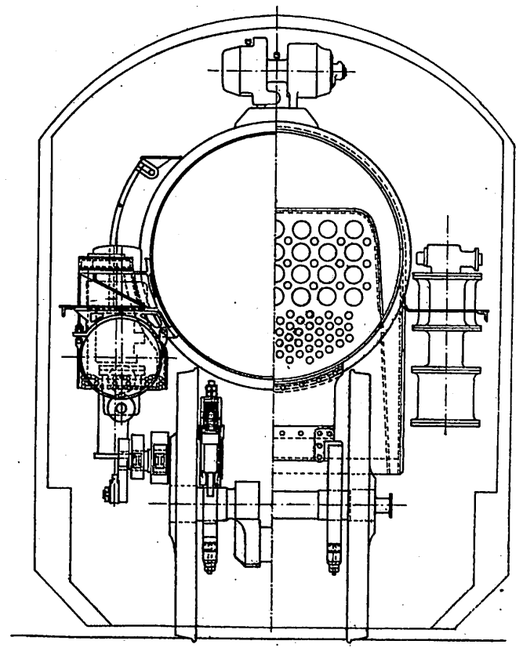
Querschnitt.



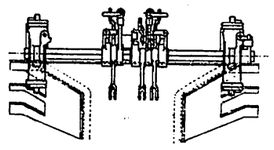
Kesselrückseite und Antrieb zum Schüttelrost.



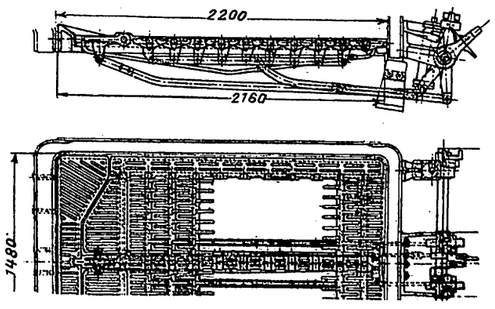
Querschnitt.



Antrieb zum Schüttelrost.



Schüttelrost.

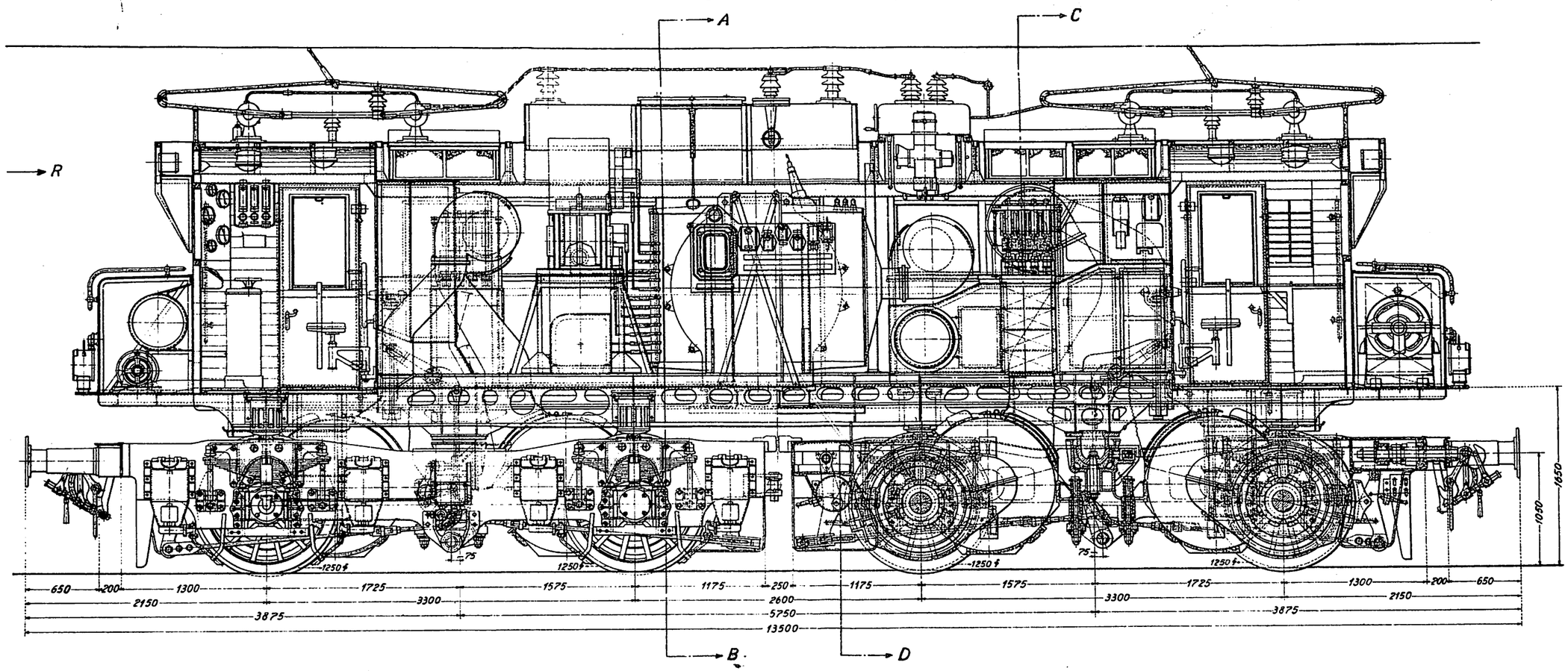


Aufsatz : Die Betriebsmittel und ihre Entwicklung bei der Japanischen Staatsbahn.

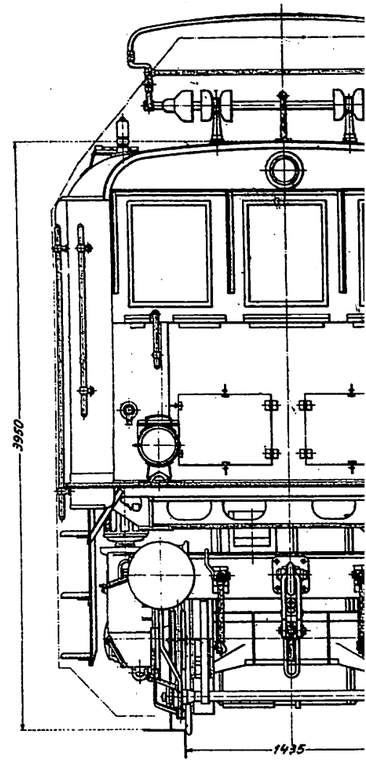
Lith. Anst v F Wirtz, Darmstadt.

Zum Aufsatz: Neuartige elektrische Versuchs-Eilgüterzuglokomotive.

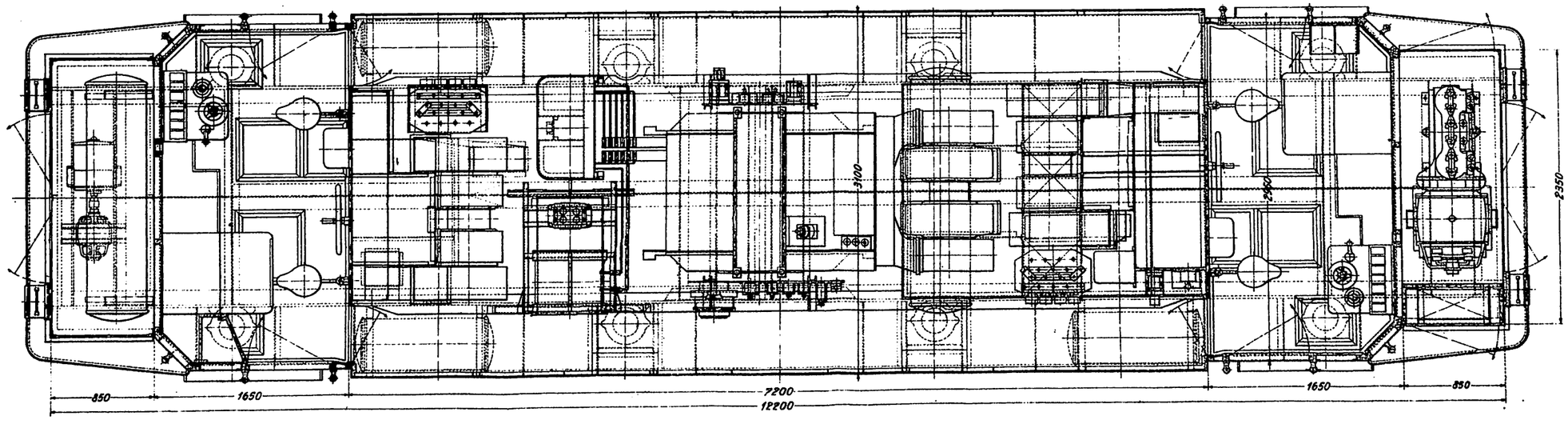
Eilgüterzuglokomotive Type Bo-Bo.

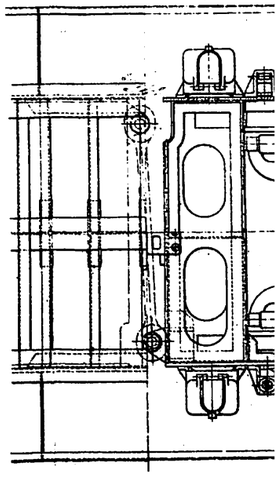


Ansicht Richtung



Grundriß des elektrischen Teils.





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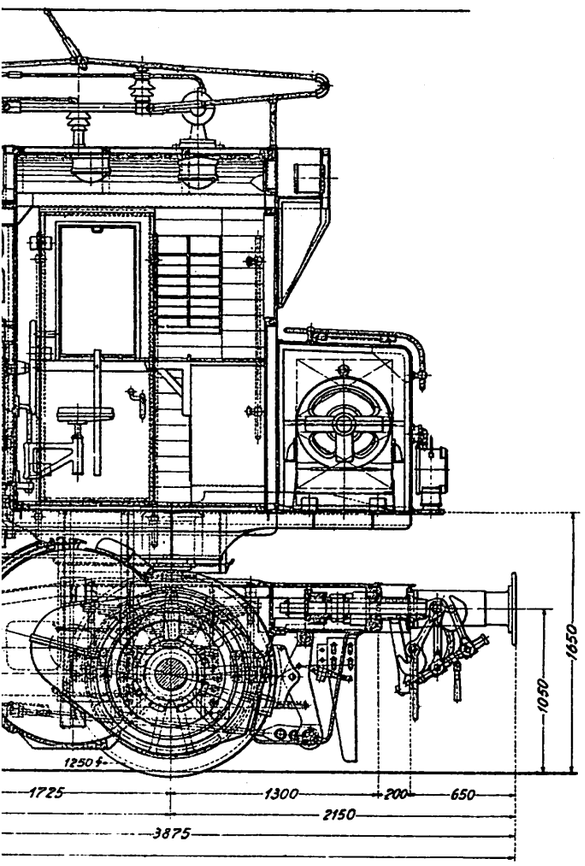
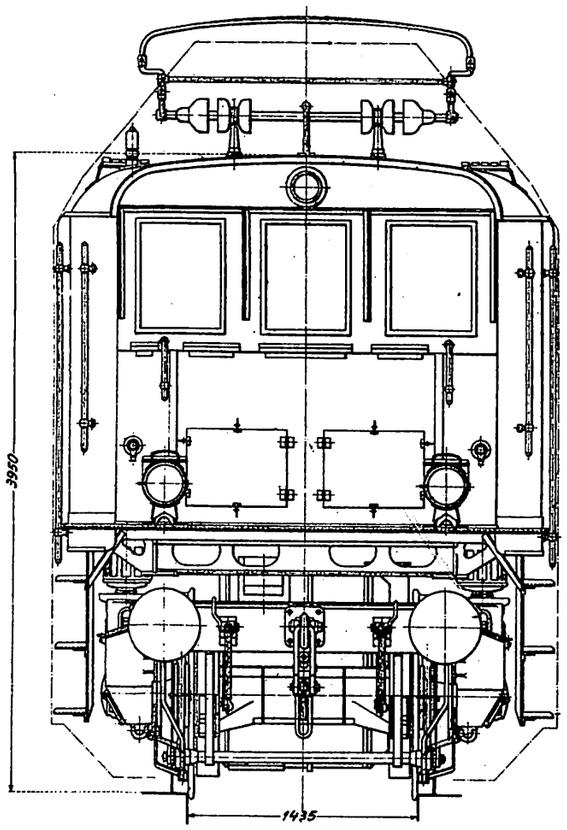
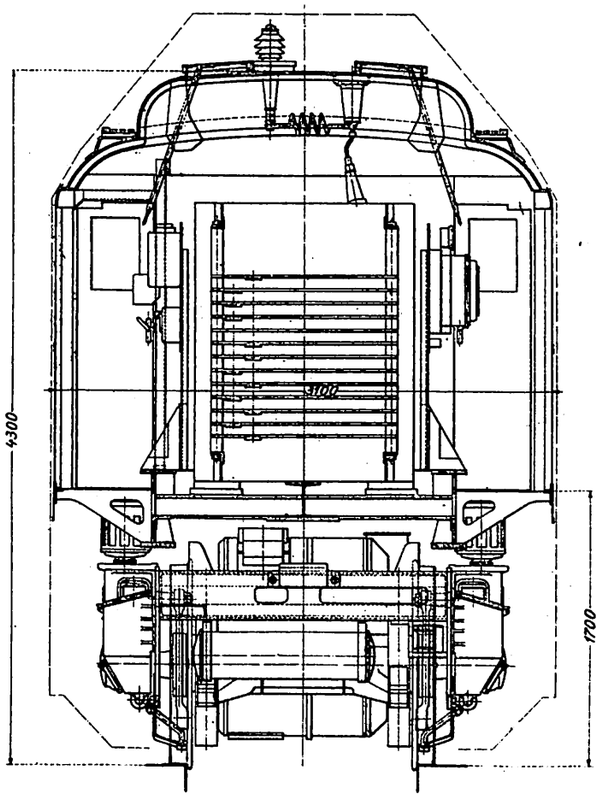
Ansicht Richtung R.

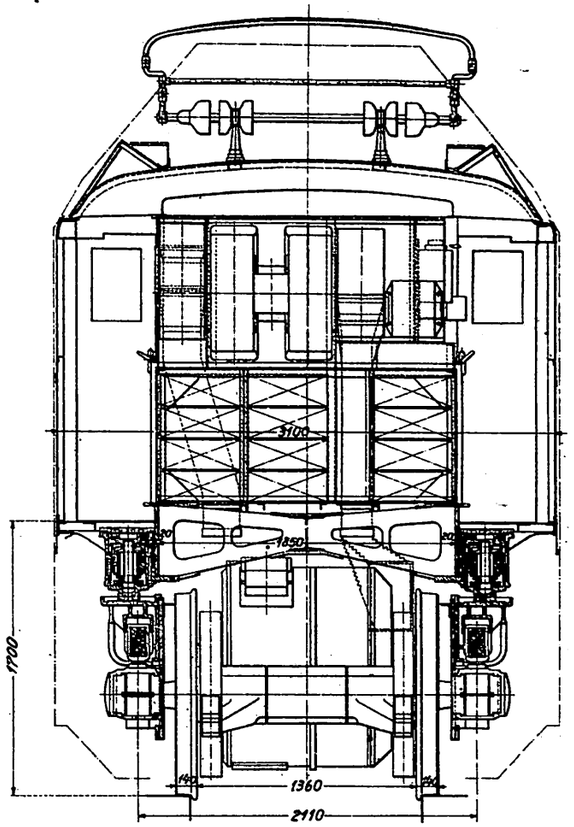




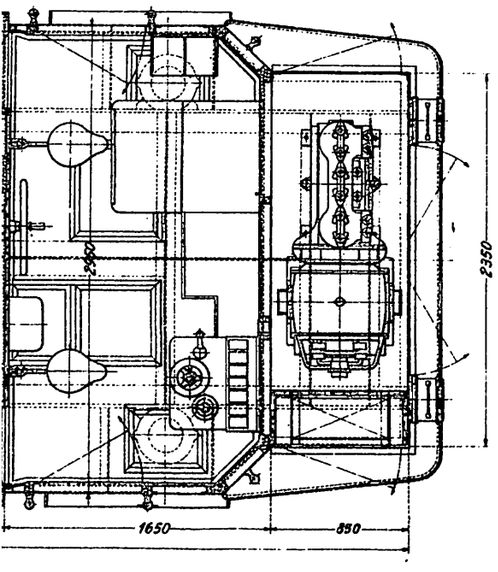
Schnitt A - B.

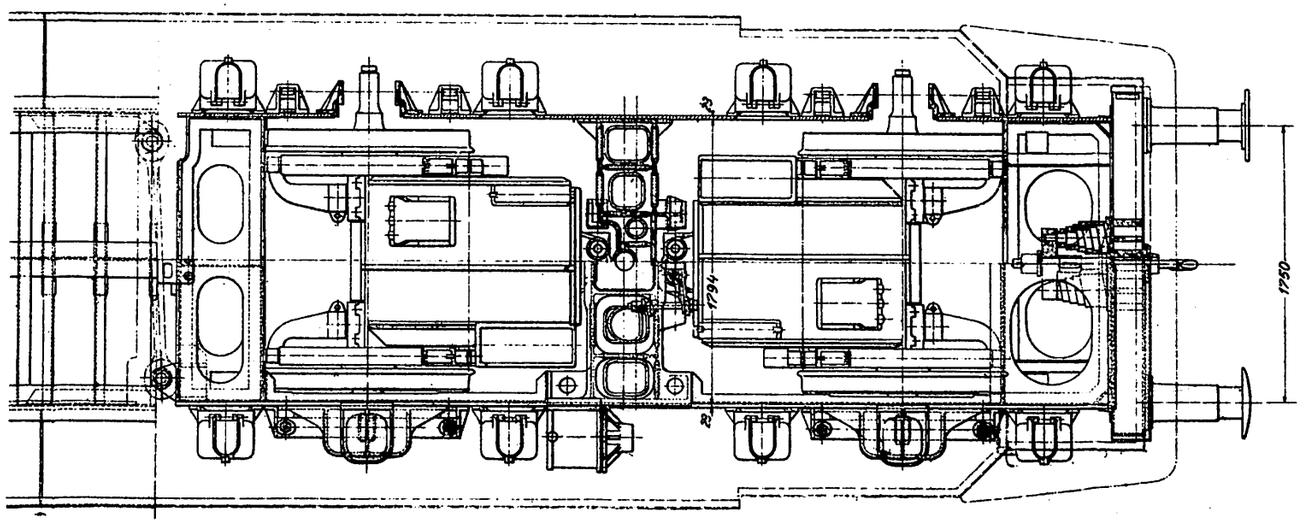


Schnitt C - D.



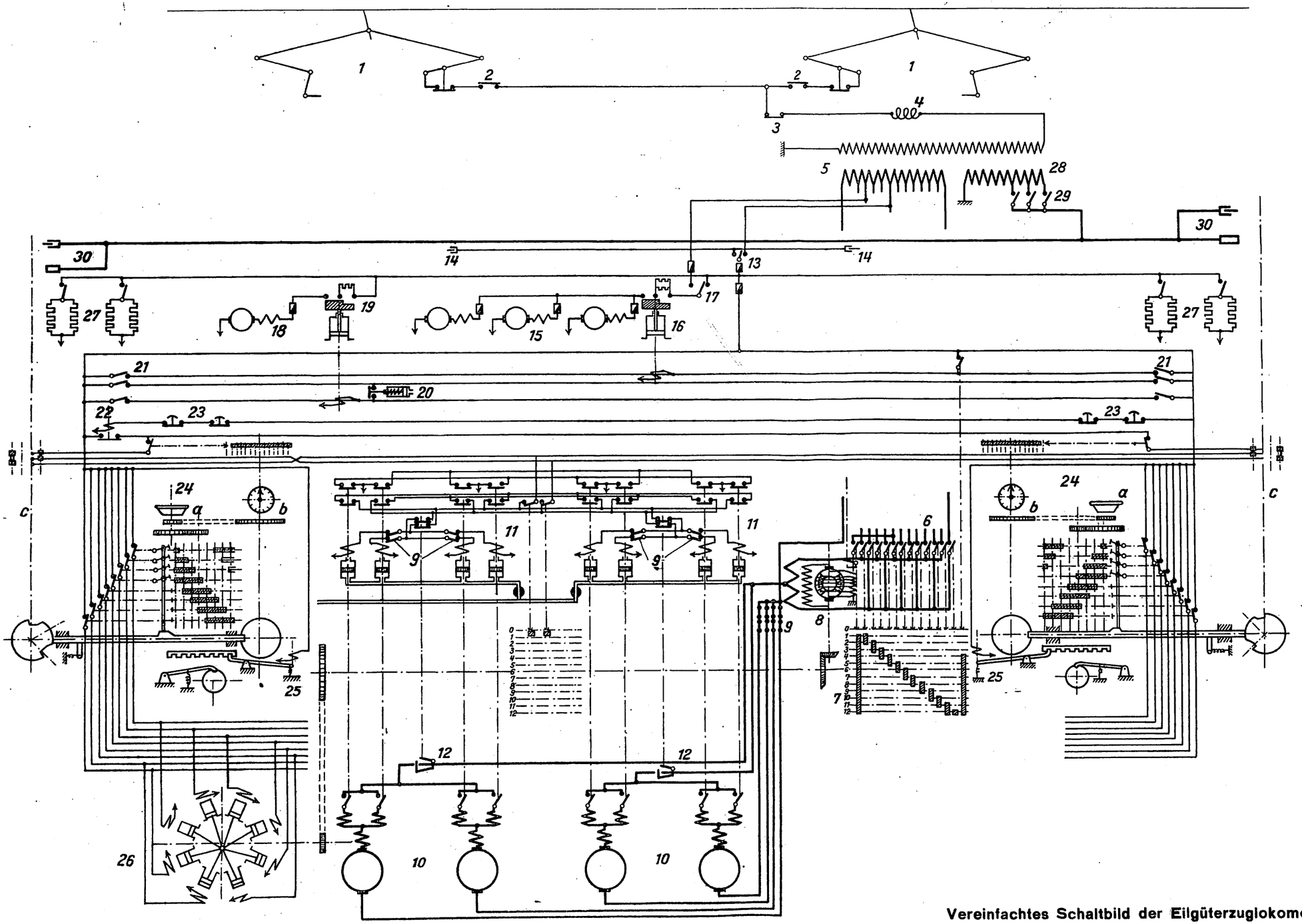
Grundriß des Fahrzeugteils.





Lith. Anst. v. F. Wirtz, Darmstadt.

Zum Aufsatz: Neuartige elektrische Versuchs-Eilgüterzuglokomotive.



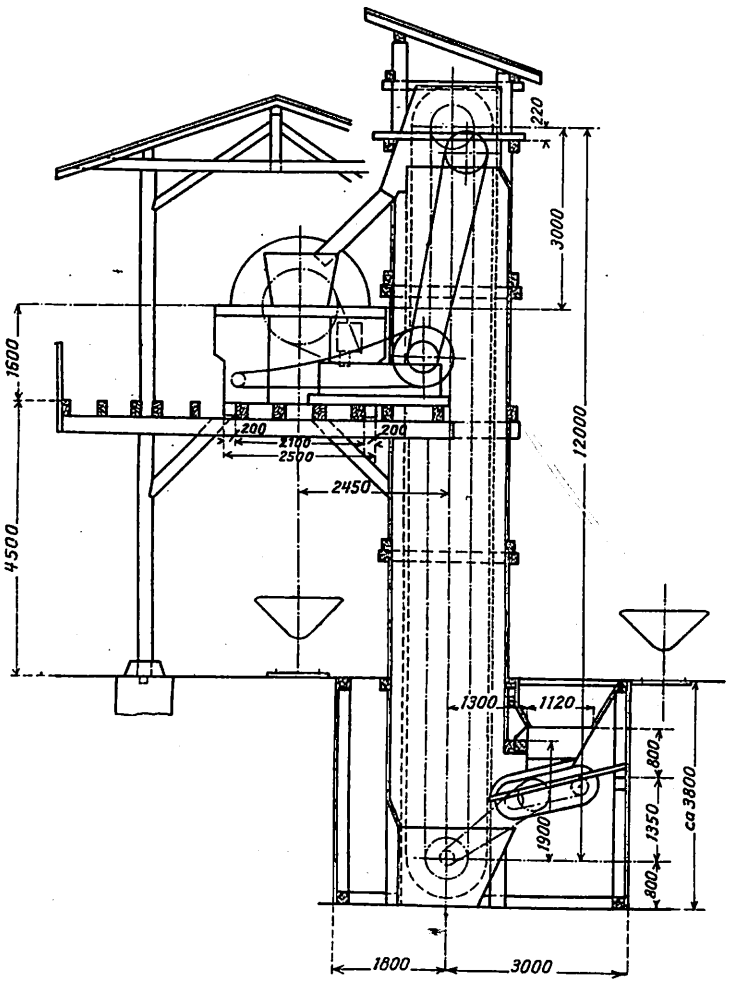
1 Stromabnehmer
2 Handtrennschalter
3 Hauptschalter
4 Drosselspule
5 Transformator
6 Nockenschalter
7 Nockenwelle
8 Feinregler mit Feinreglertransformator
9 Motortrennschalter
10 Triebmotoren
11 Fahrtwendeschütze mit Verriegelung
12 Höchststromauslöser
13 Prüfumschalter
14 Prüfdosen
15 Lüftermotoren
16 Anlassschütz der Lüftermotoren
17 Spannungsumschalter der Lüftermotoren (100/200 Volt)
18 Motorluftpumpe
19 Anlassschütz der Motorluftpumpe
20 Druckregler
21 Handschalter für Lüftermotoren und Motorluftpumpe
22 Verriegelungsschütz
23 Steuerstrom-Druckknopfschalter
24 Fahrschalter a Steuerwalze I, b Steuerwalze II, c Richtungswalze
25 Nullspannungsverriegelung
26 Steuermotor
27 Heizofen bzw. Wärmeschrank
28 Heizwicklung des Transformators
29 Heizschütze
30 Zugheizkupplung

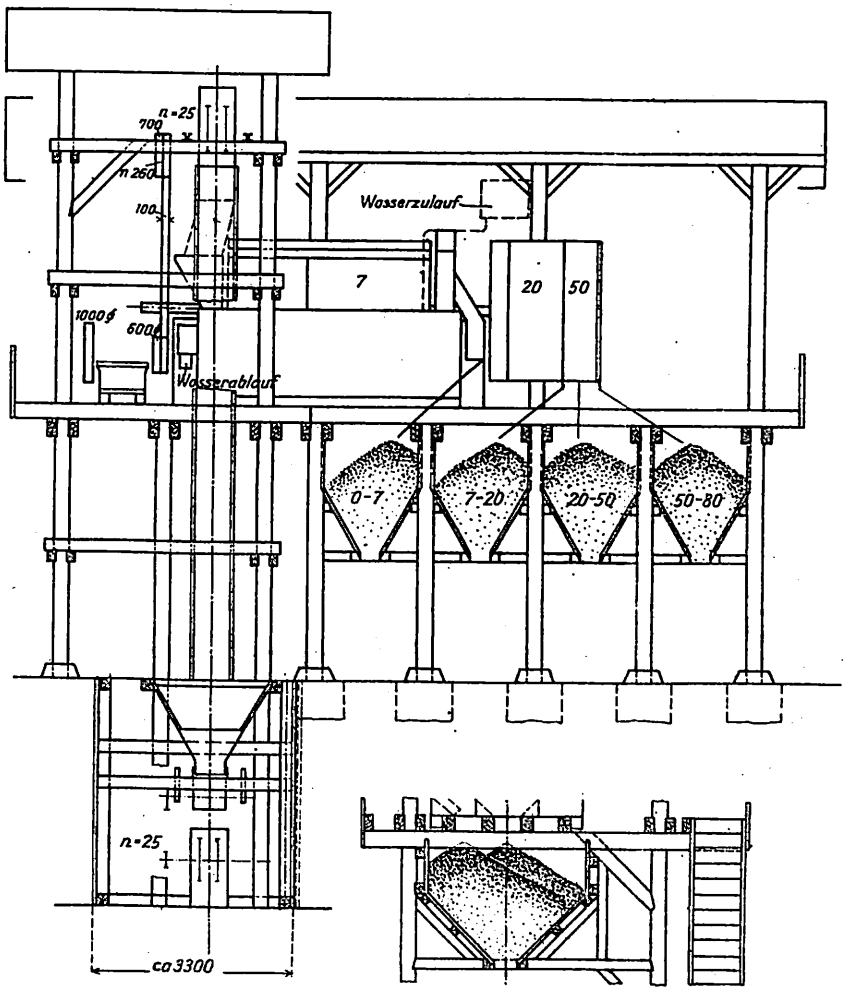
Vereinfachtes Schaltbild der Eilgüterzuglokomotive Type Bo-Bo.

Verlag von Julius Springer, Berlin.

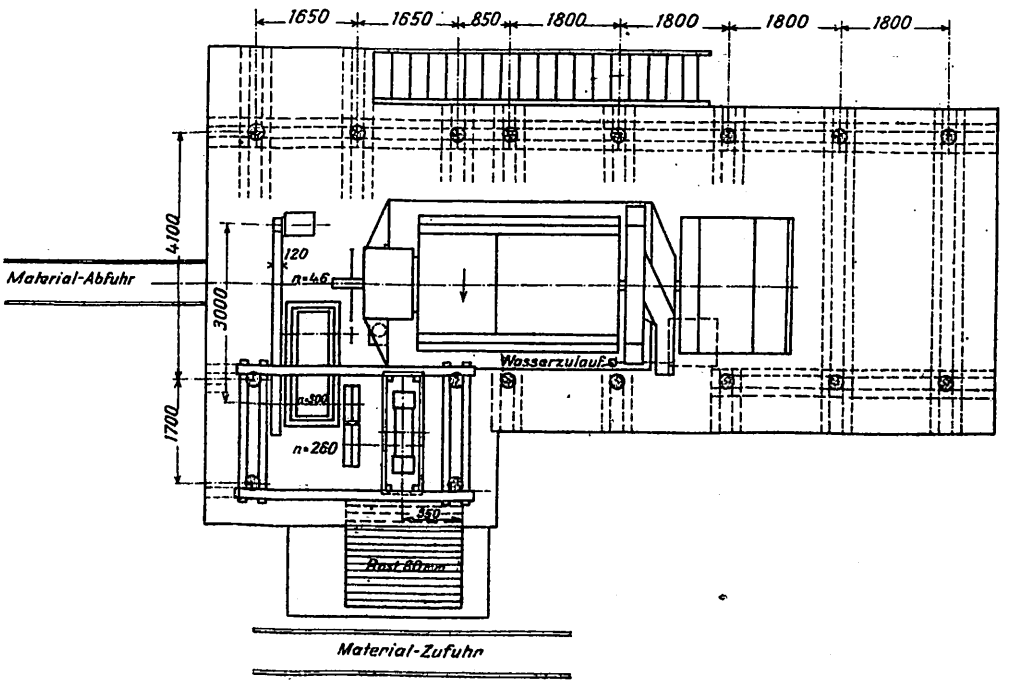
Lith. Anst. v. F. Wirtz, Darmstadt

Zum Aufsatz: Das Kieswerk Marstetten der Reichsbahndirektion Stuttgart in seinen wirtschaftlichen und wissenschaftlichen Auswirkungen.





Aufstellungsplan einer Excelsior Kieswasch - und Sortieranlage.



Verlag von Julius Springer, Berlin.

Lith. Anst. v. F. Wirtz, Darmstadt.

Zum Aufsatz: Das Kieswerk Marstetten der Reichsbahndirektion Stuttgart in seinen wirtschaftlichen und wissenschaftlichen Auswirkungen.

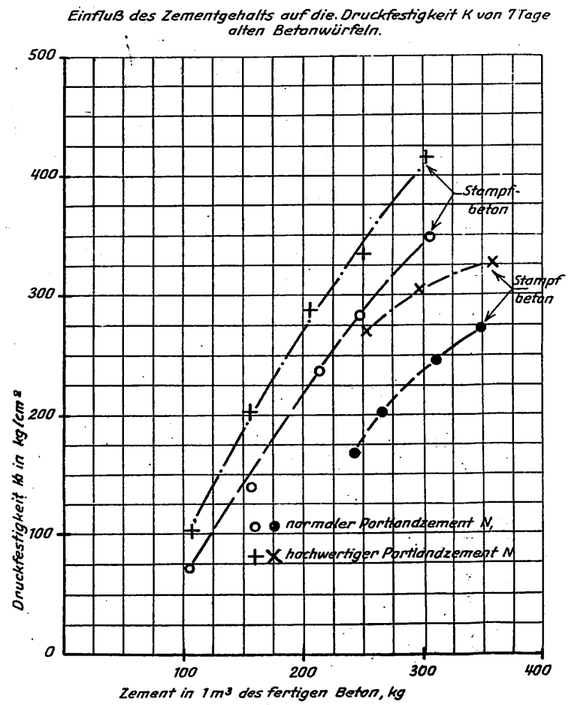


Abb. 1a.

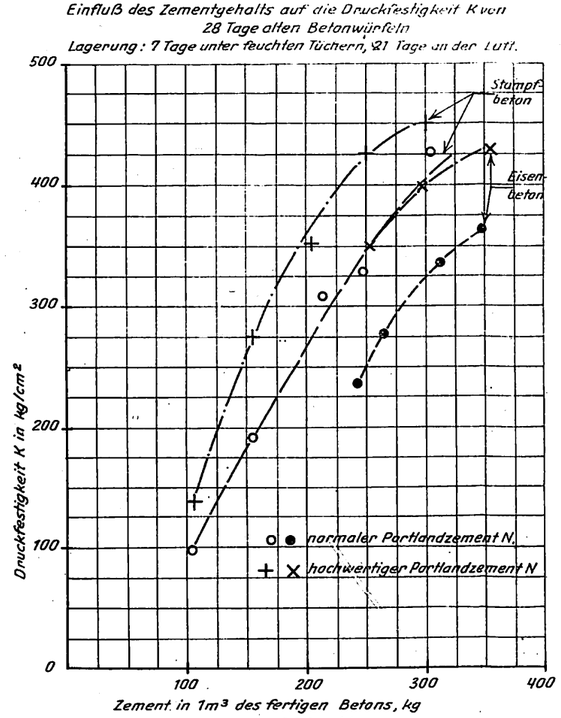


Abb. 1b.

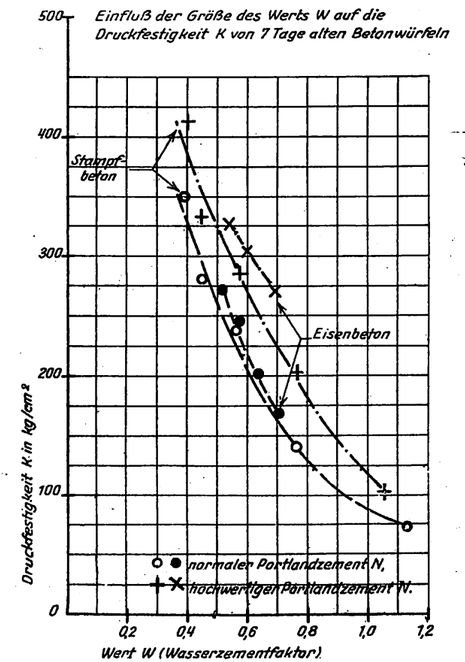


Abb. 2a.

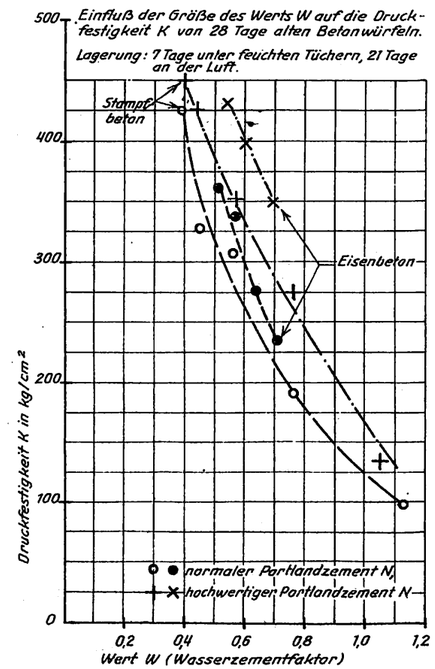
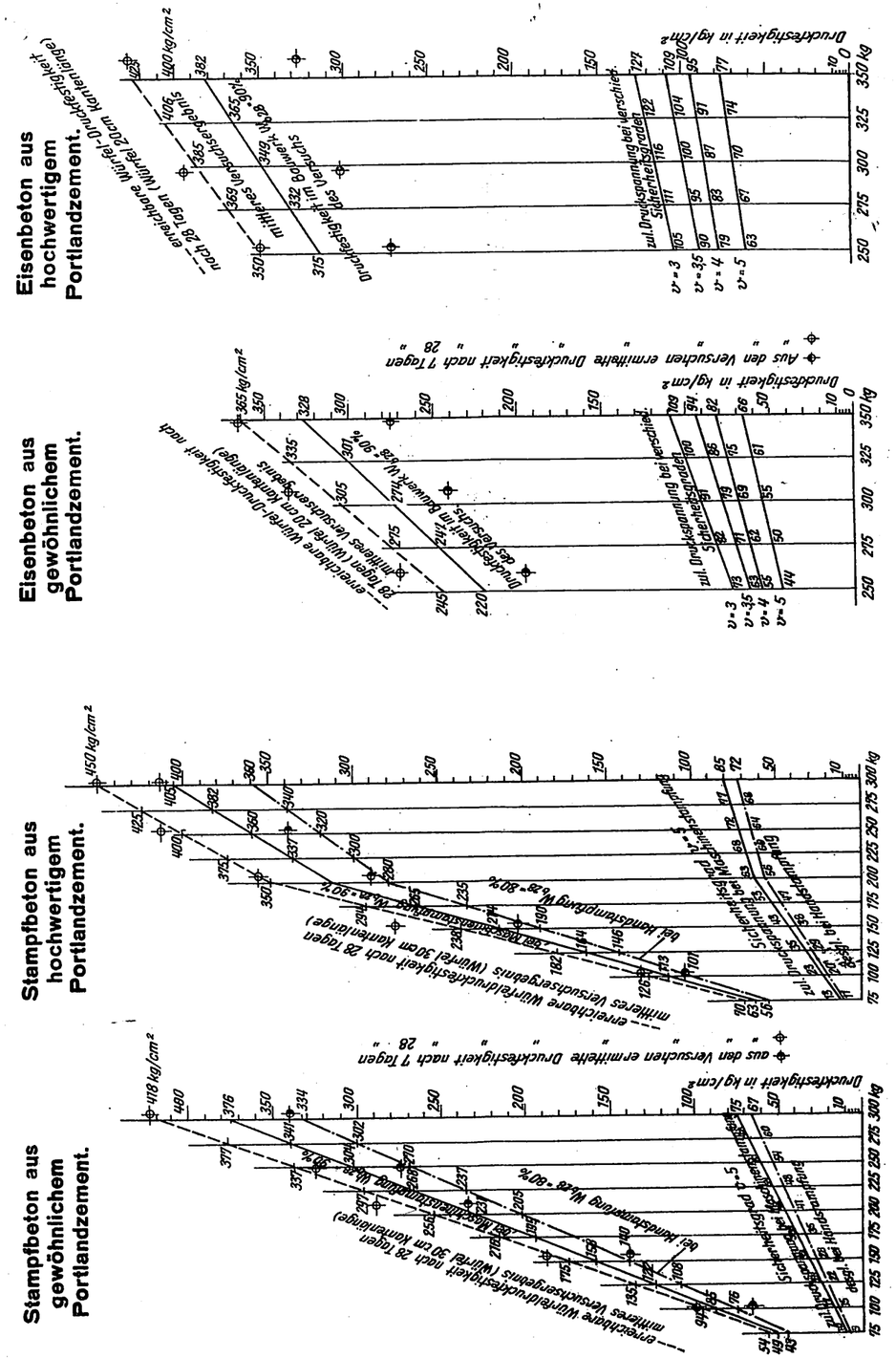


Abb. 2b.



Zementbedarf für 1m³ fertig verarbeiteten Beton in kg.

Abb. 4. Druckfestigkeit des Eisenbetons bei Verwendung von Marstetter Zuschlagstoffen.

Zementbedarf für 1m³ fertig verarbeiteten Beton in kg.

Abb. 3. Druckfestigkeit des Stampfbetons bei Verwendung von Marstetter Zuschlagstoffen.

Verlag von Julius Springer, Berlin.

Lith. Anst. v. F. Wirtz, Darmstadt.

Abb. 1a.

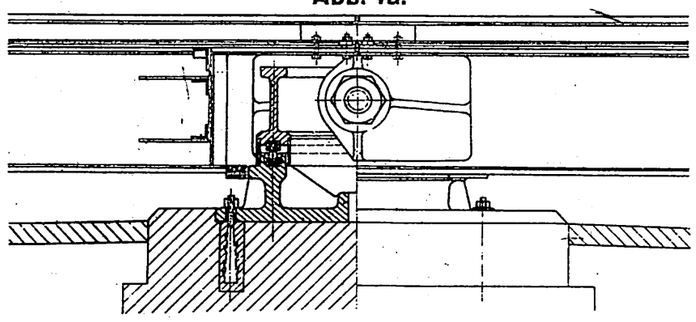


Abb. 1c.

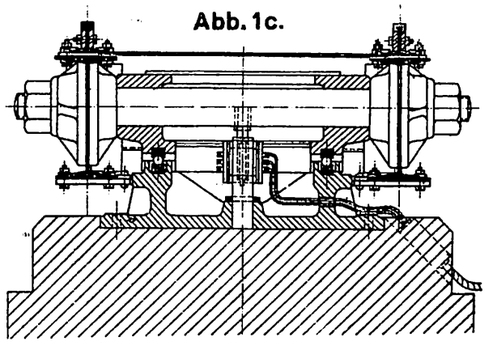


Abb. 1b.

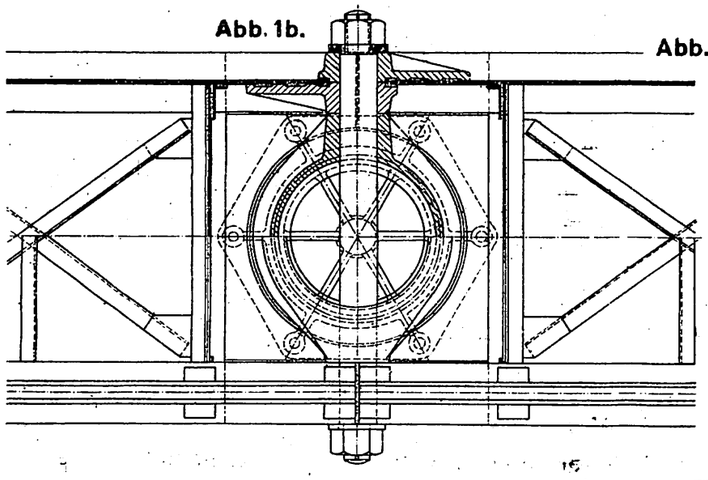
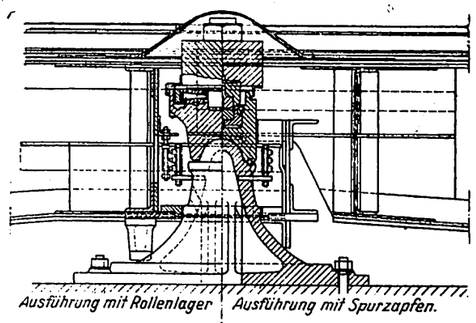


Abb. 1a - c. Mittelteil mit durchgehendem Bolzen Patent der Firma J. Vögele, Mannheim.

Zum Aufsatz: Neuere Lokomotivdrehscheiben.

(Abbildungen im Maßstabe 1 : 30)

Abb. 4a.



Ausführung mit Rollenlager — Ausführung mit Spurzapfen.

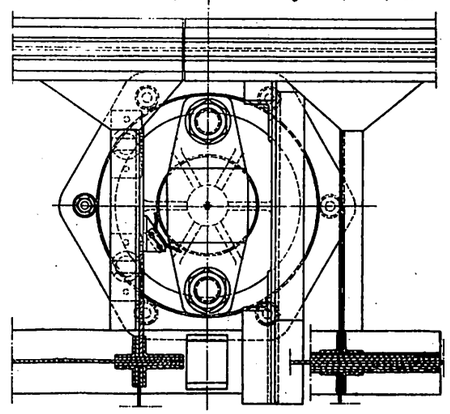
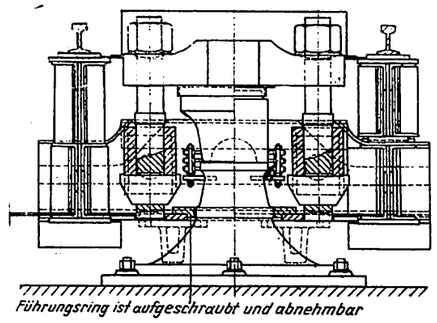


Abb. 4b.

Abb. 4c.



Führungsring ist aufgeschraubt und abnehmbar

Abb. 7a. Schnitt a-

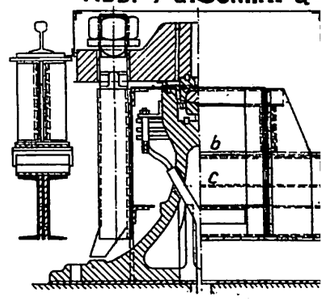
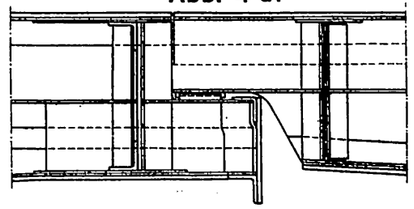
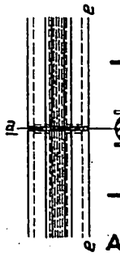


Abb. 4d.



Draufsicht



Schnitt b

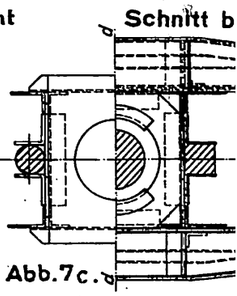


Abb. 7c.

Abb. 4a-d. Mittelteil der Maschinenfabrik Deutschland, Dortmund.

Abb. 9 a-c. Mittelteil mit Gelenkblech der Rheiner Maschinenfabrik Windhoff.

Abb. 9a.

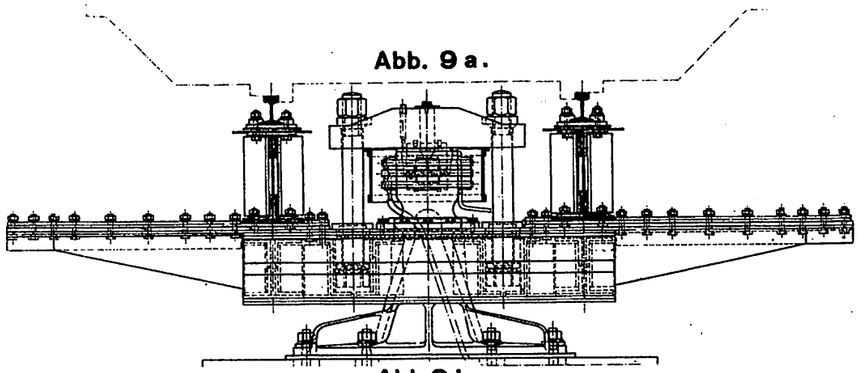


Abb. 9b.

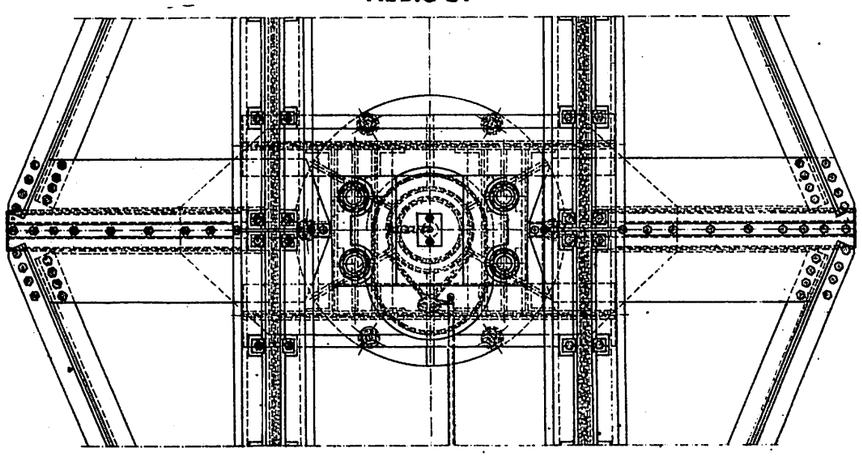


Abb.

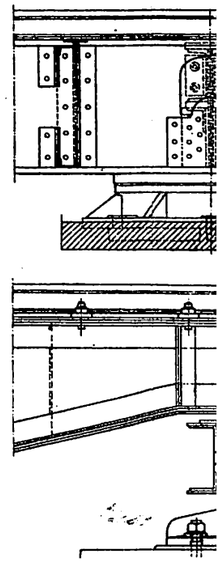


Abb. 10
von

Abb. 3a.

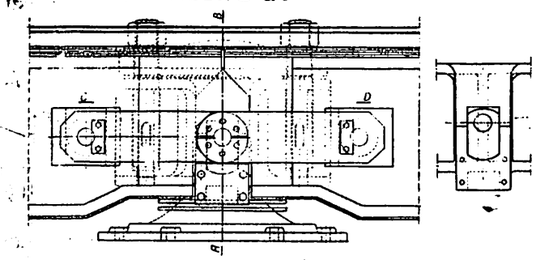


Abb. 3c. Schnitt A - B.

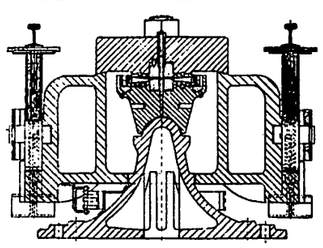


Abb. 3. Mittelteil nach Patent von Christoph u. Unmack, Niesky.

Abb. 3b. Schnitt C - D.

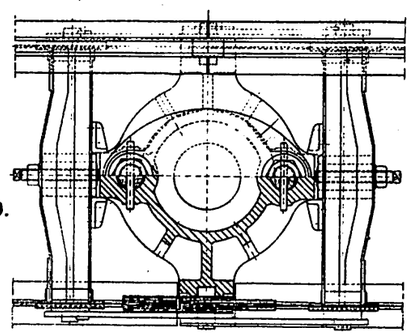


Abb. 2a. Schnitt A - A.

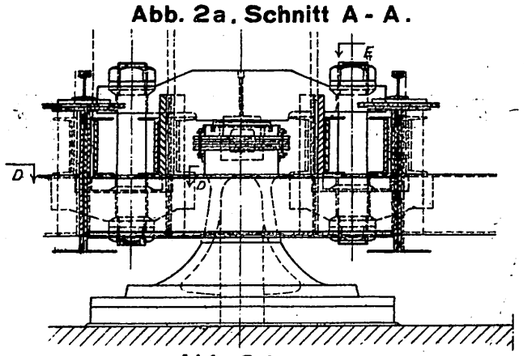
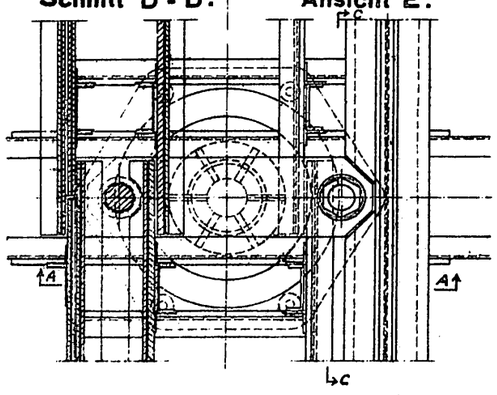


Abb. 2b.

Schnitt D - D. Ansicht E.



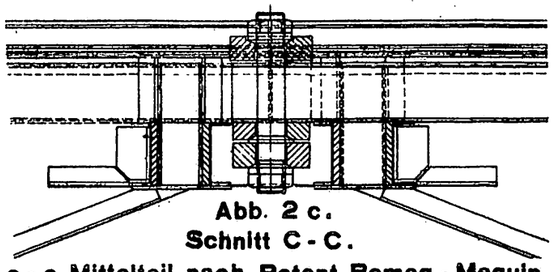


Abb. 2c. Schnitt C - C.

Abb. 2a - c. Mittelteil nach Patent Bamag - Meguin, Berlin.

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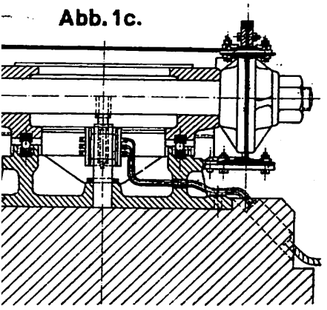
Abb. 1c.

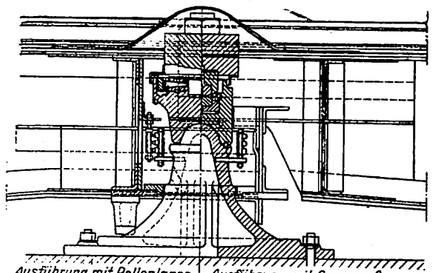


mit durchgehendem Bolzen
ma J. Vögele, Mannheim.

Zum Aufsatz:
okomotivdrehscheiben.

lungen im Maßstabe 1:30)

Abb. 4a.



Ausführung mit Rollenlager | Ausführung mit Spurzapfen.

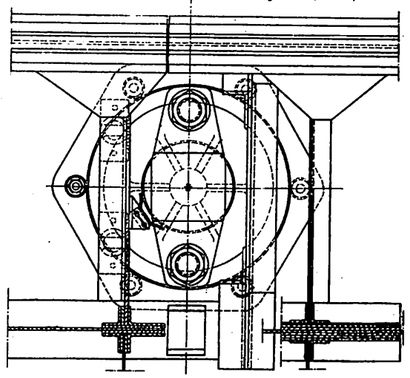
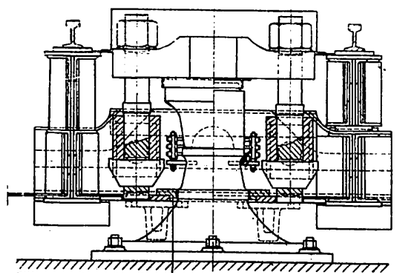


Abb. 4b.

Abb. 4c.



Führungsring ist aufgeschraubt und abnehmbar

Abb. 4d.

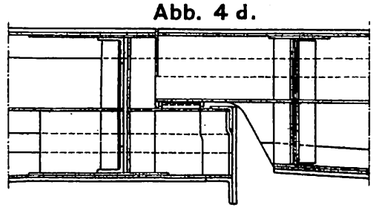
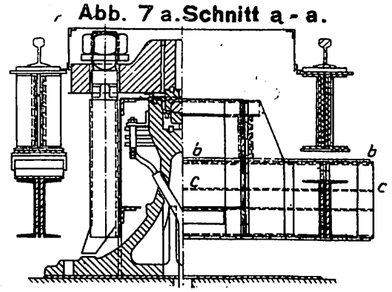
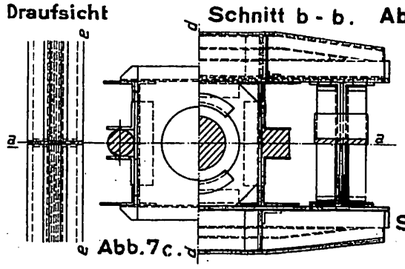


Abb. 4a-d. Mittelteil der Maschinenfabrik Deutschland, Dortmund.

Abb. 7a. Schnitt a-a.



Draufsicht



Schnitt b-b.

Schnitt c-c.

Abb. 7a-c. Mittelteil der Maschinenfabrik Augsburg-Nürnberg, Werk Gustavsburg.

Abb. 7b. Schnitt e-e.

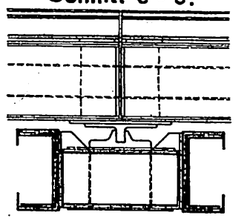


Abb. 8a.

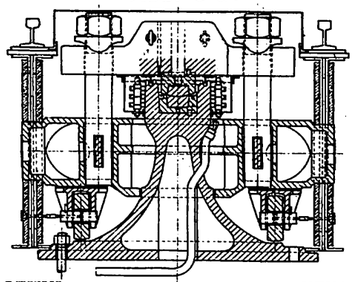
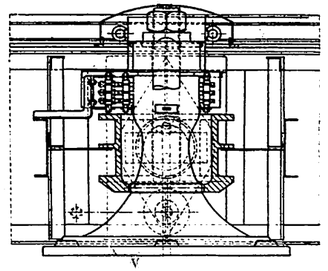


Abb. 8c.



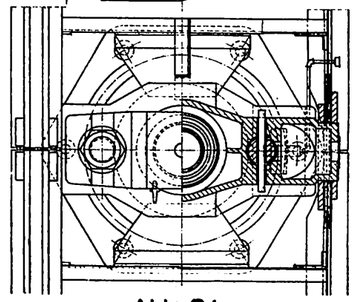


Abb. 8b.

Abb. 8a-c. Mittelteil der Firma J. Vögele Mannheim mit einheitlichem Königstuhl der Deutschen Reichsbahn.

Abb. 5

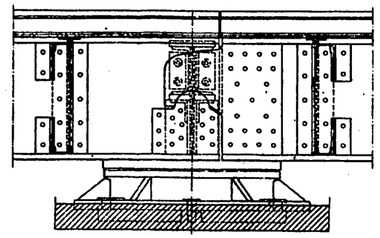


Abb. 5. Mittelteil mit Daumengelenk des Eschweiler Bergwerkvereins.

Abb. 6.

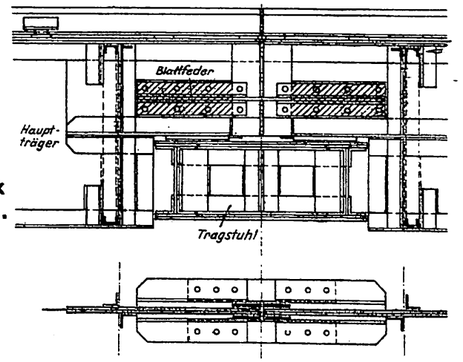
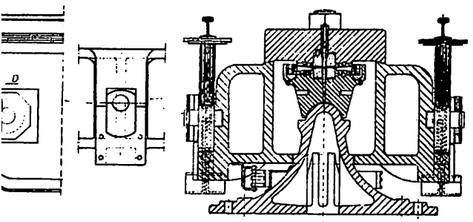


Abb. 6.
Mittelteil mit Blattfedergelenk des Eschweiler Bergwerkvereins.

Abb. 3c. Schnitt A-B.



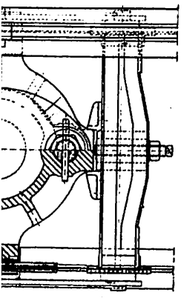


Abb. 3. Mittelteil nach Patent von Christoph u. Unmack, Niesky.

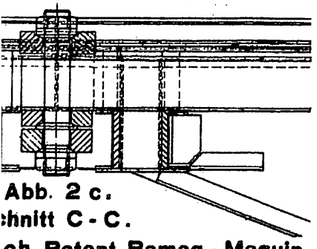


Abb. 2c.
chnitt C-C.
ch Patent Bamag-Meguin, Berlin.

Abb. 9a-c.
Mittelteil mit Gelenkblech der Rheiner Maschinenfabrik Windhoff.

Abb. 9a.

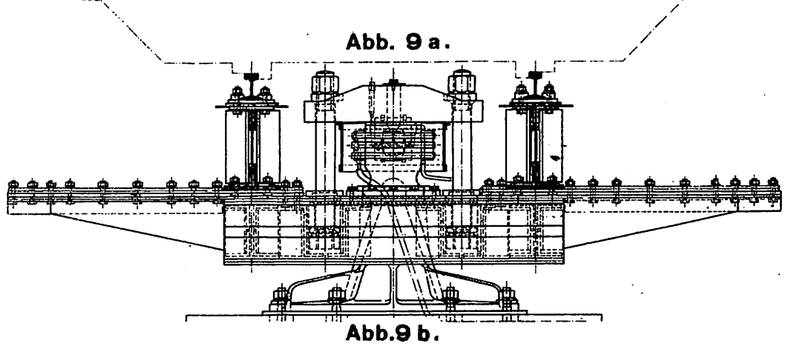


Abb. 9b.

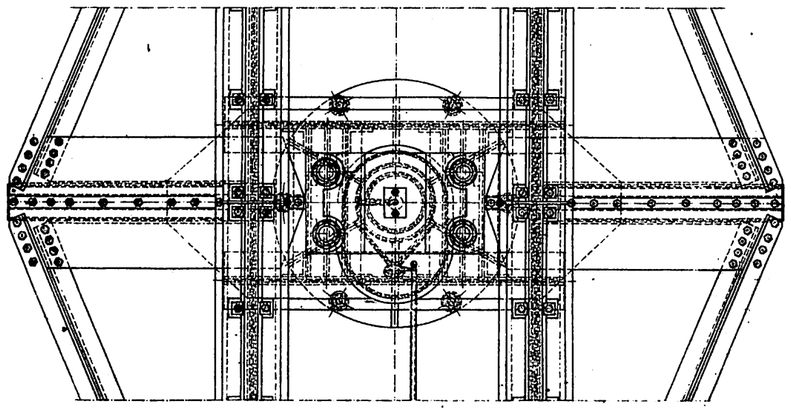
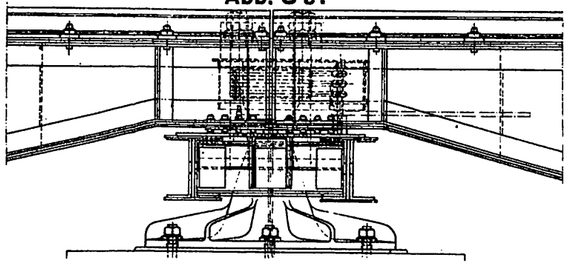


Abb. 9c.



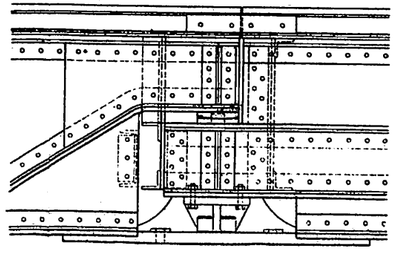


Abb. 10. Mittelteil mit Kipplager von J. Vögele, Mannheim.

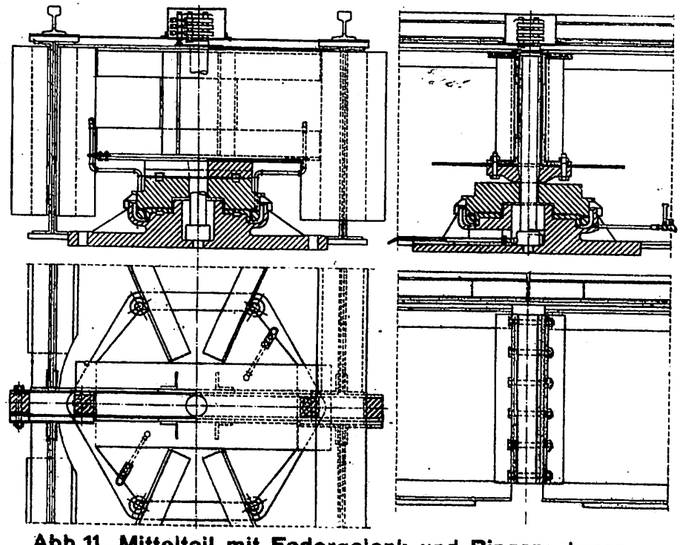
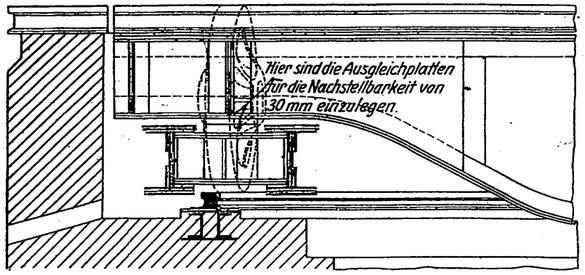


Abb. 11. Mittelteil mit Federgelenk und Ringspurlager der Firma J. Vögele, Mannheim.

Schnitt A - B.



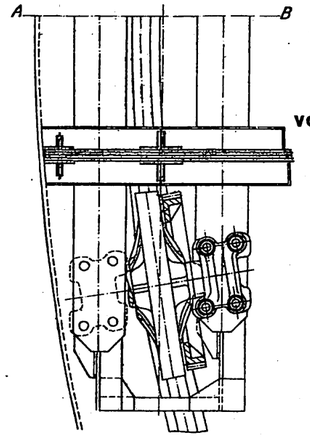
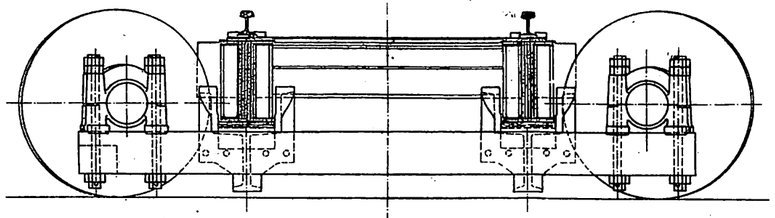


Abb. 1.
Verbindung von Haupt - und Kopfträger.



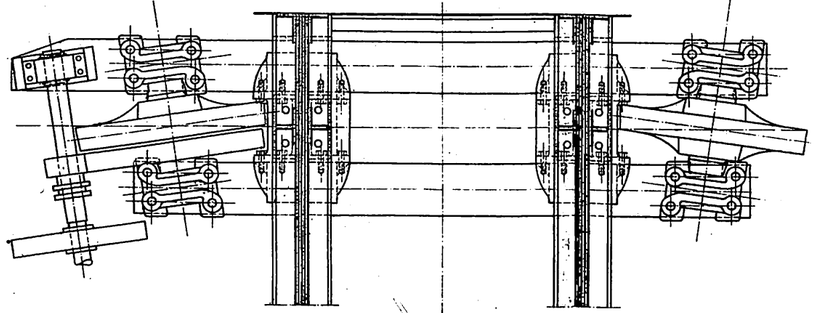


Abb. 7a. Schnitt a - a.

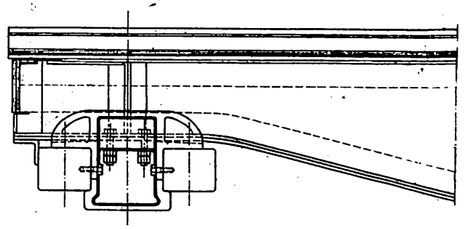


Abb. 2 Barren- Kopfträger der Maschinenfabrik Deutschland, Dortmund.

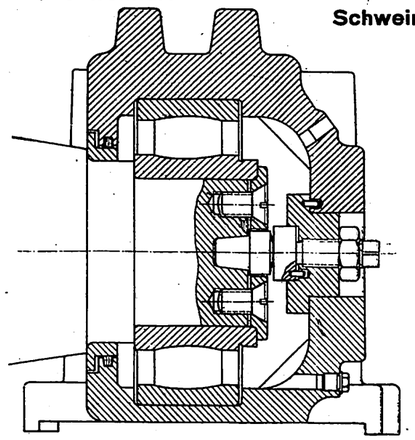
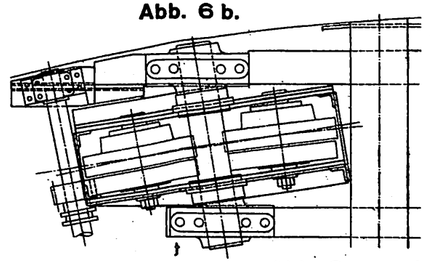


Abb. 4 Tonnenlager für Laufräder: Kugelfabrik Fischer, Schweinfurt und Fichtel & Sachs A-G, Schweinfurt.

Abb. 6 b.



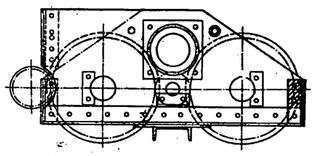


Abb. 6 a.

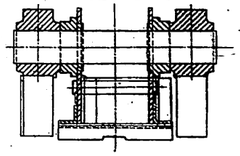


Abb. 6 c.

Abb. 6 a - c. Laufradlagerung der Achtrad-Drehscheibe der Maschinenfabrik Deutschland, Dortmund.

7 c. Schnitt b - b.

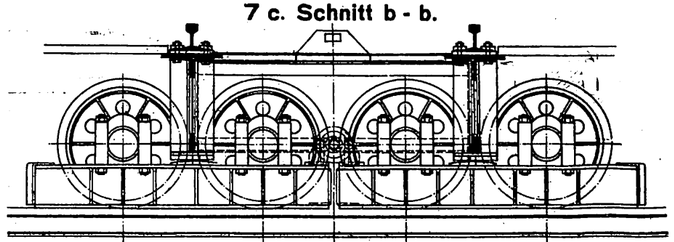
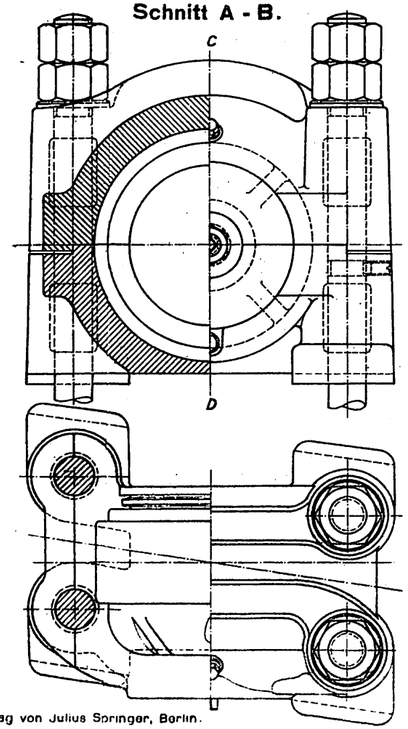
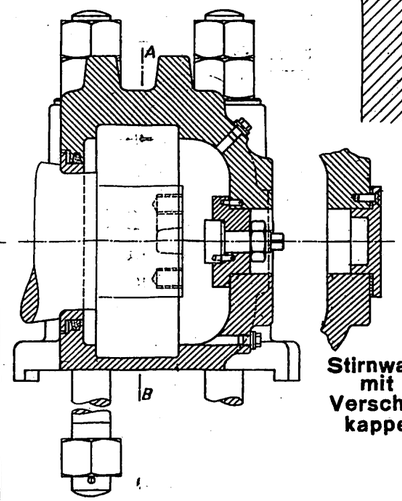


Abb. 7 a - c. Laufradlagerung der Achtrad-Drehscheibe der Maschinenfabrik Augsburg - Nürnberg, Werk Gustavsburg.

Schnitt A - B.



Schnitt C-D.



Stirnwand mit Verschlußkappe.

Abb. 3. Laufradlager für Vierrad-Drehscheiben.

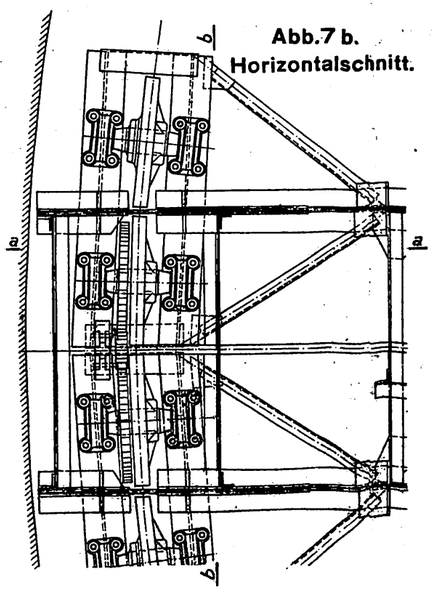


Abb.7 b. Horizontalschnitt.

Zum Aufsatz:
Neuere Lokomotivdrehscheiben.
(Sämtliche Abbildungen sind im Maßstabe 1:30 dargestellt.)

Abb. 5.
Kegelwalzenlager im Königsstuhl von Bamag - Meguin

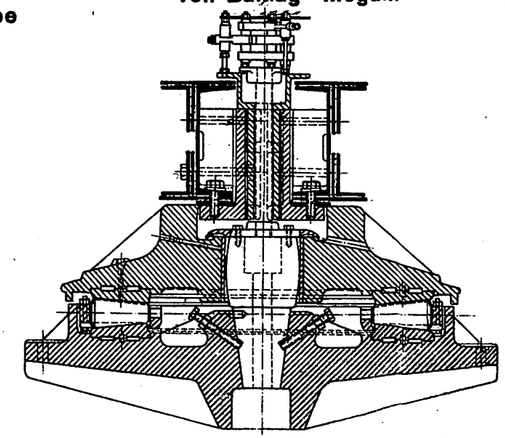


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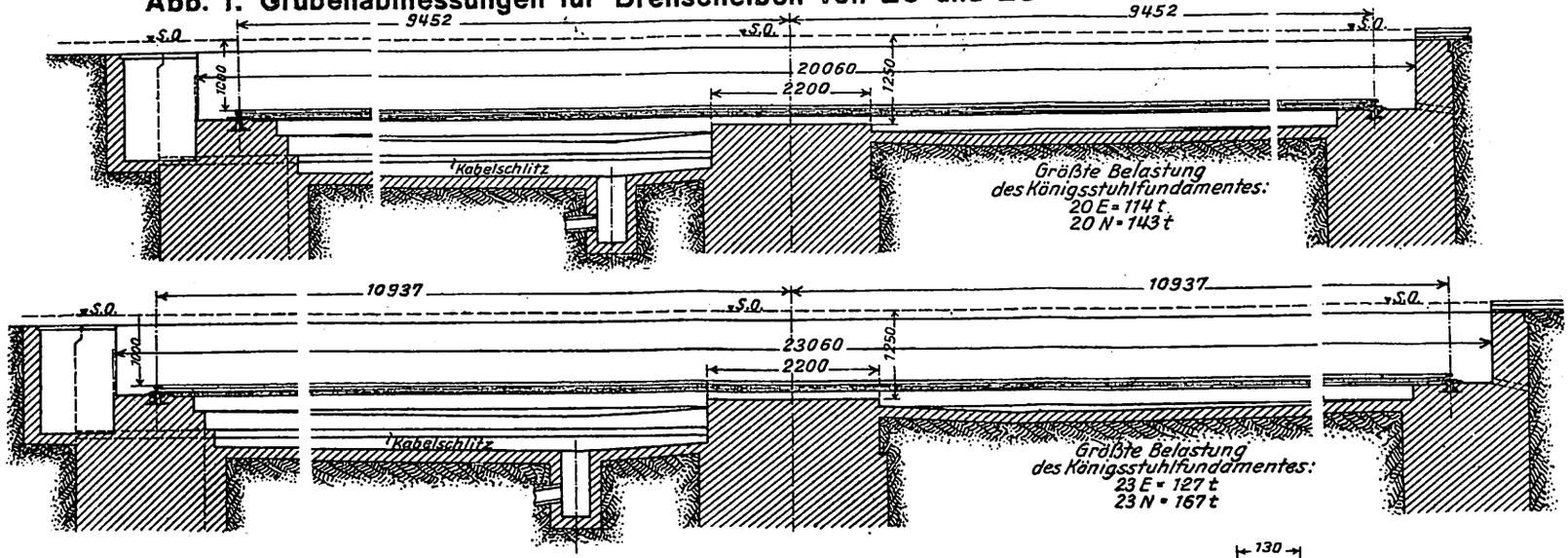
Abb. 1. Grubenabmessungen für Drehscheiben von 20 und 23 m. Durchmesser.



Zum Aufsatz: Neuere Lokomotivdrehscheiben.

(Abbildungen im Maßstabe 1 : 30)

Abb. 2. Laufrad für Vierrad - Drehscheiben

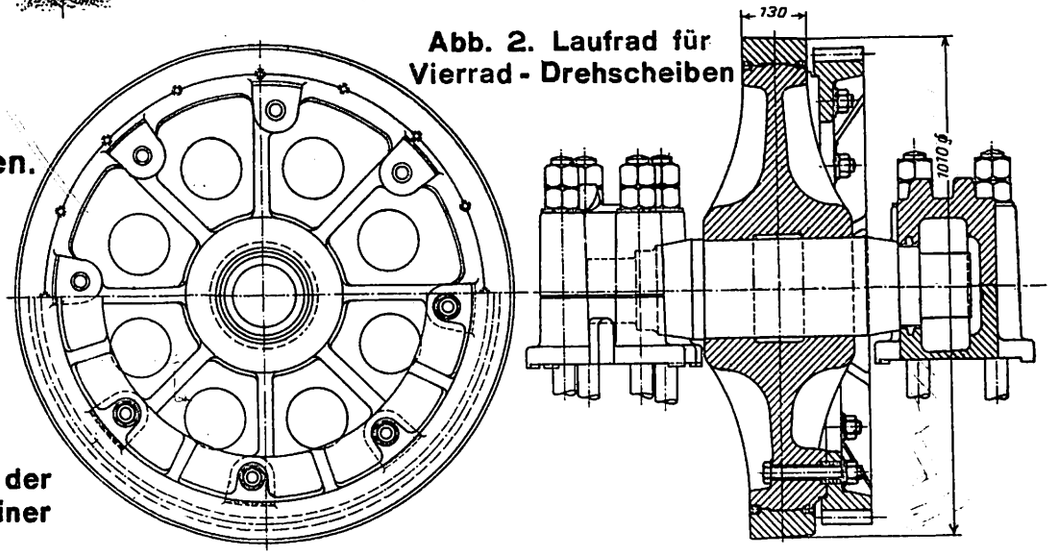


Abb. 3 und 4. Laufradlagerung der Achtrad - Drehscheiben der Rheiner Maschinenfabrik Windhoff.

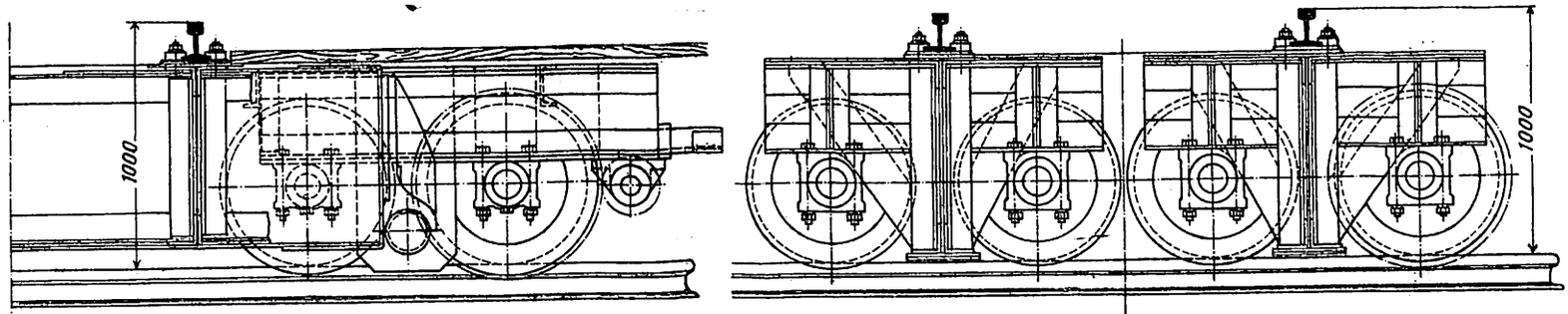


Abb. 3.

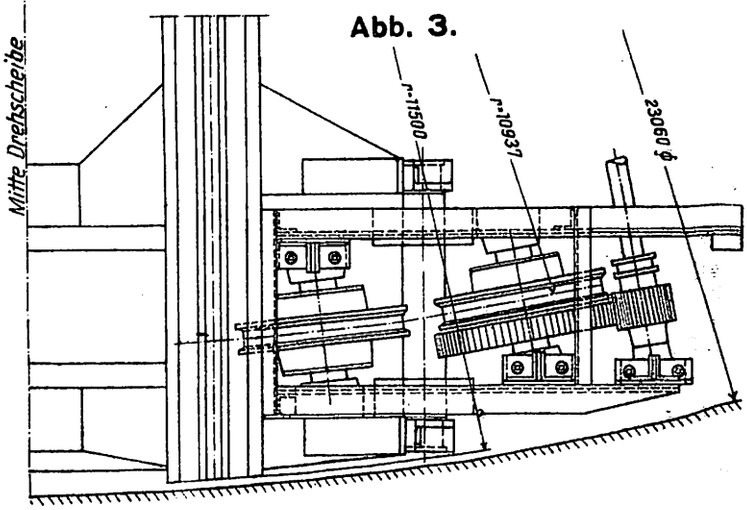
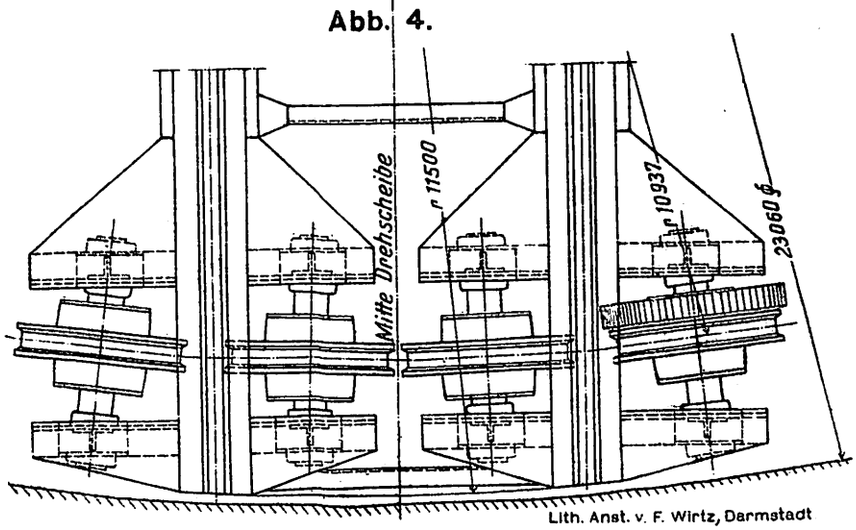


Abb. 4.



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Lith. Anst. v. F. Wirtz, Darmstadt

Rollgeschwindigkeit 5 km/h

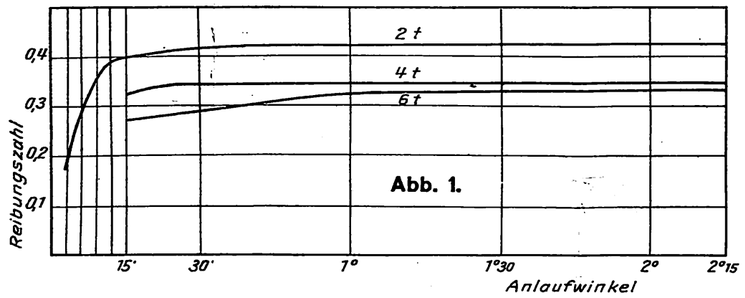


Abb. 1.

Rollgeschwindigkeit 20 km/h.

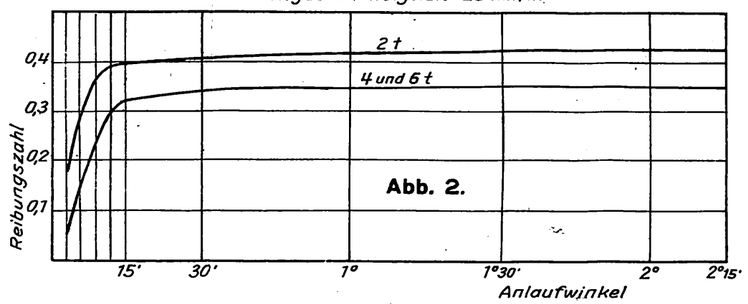


Abb. 2.

Rollgeschwindigkeit 50 km/h.

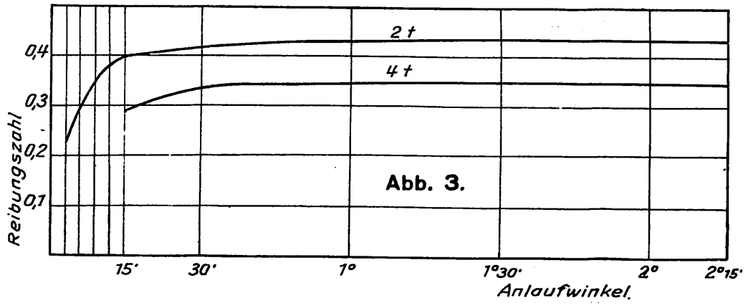
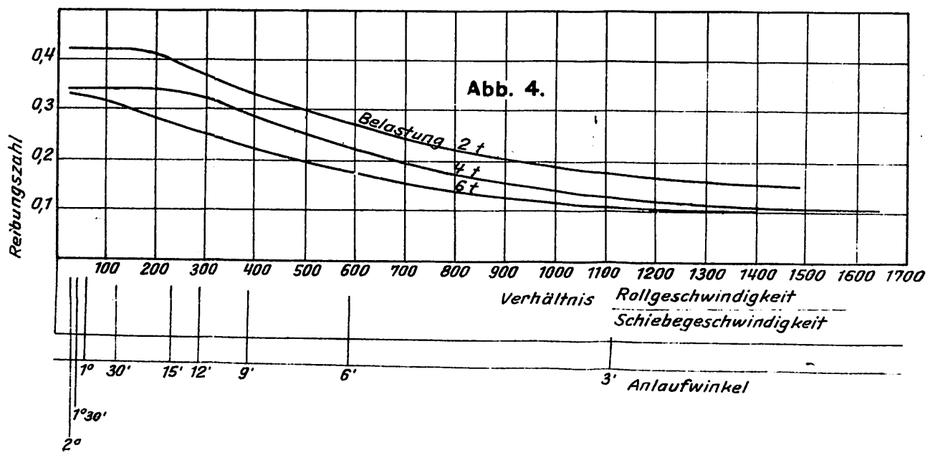


Abb. 3.



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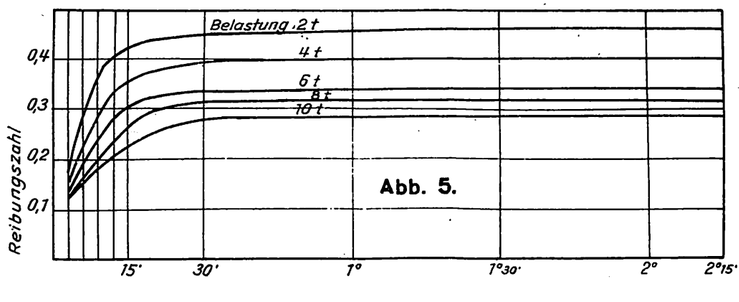

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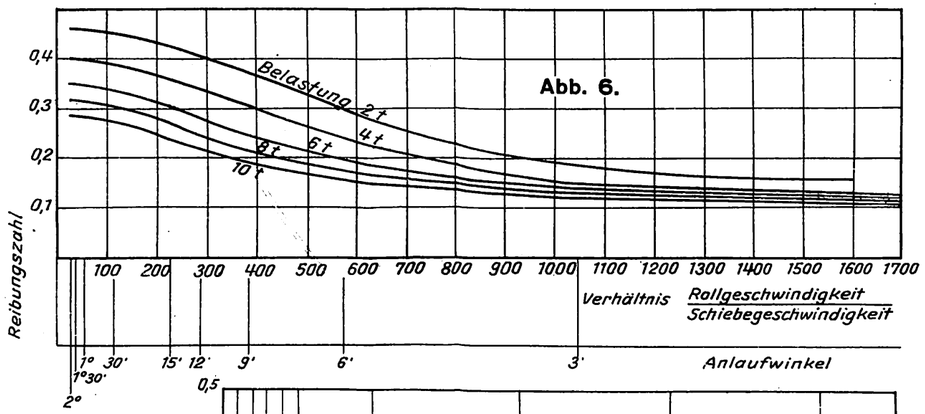

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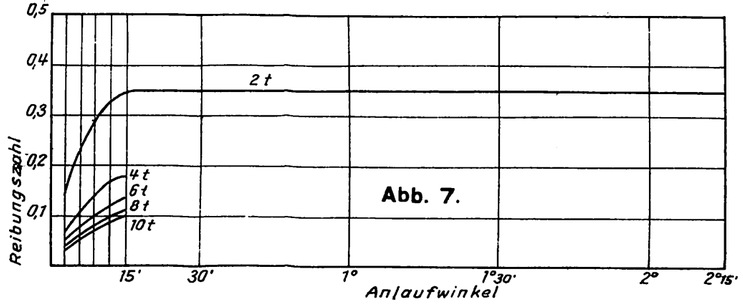

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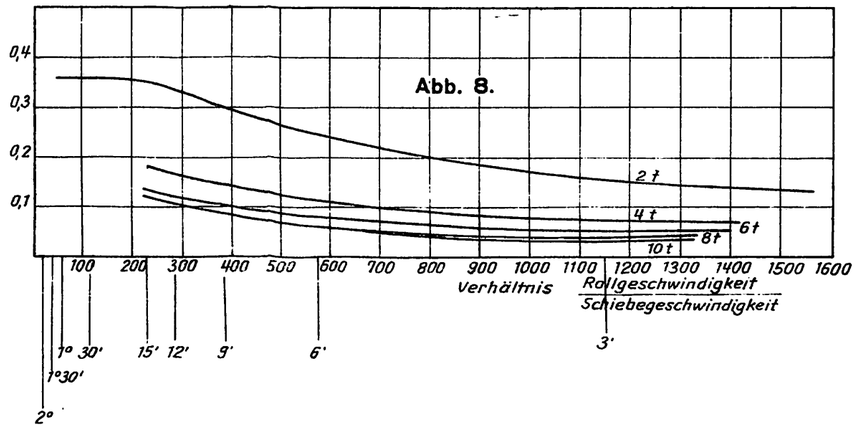

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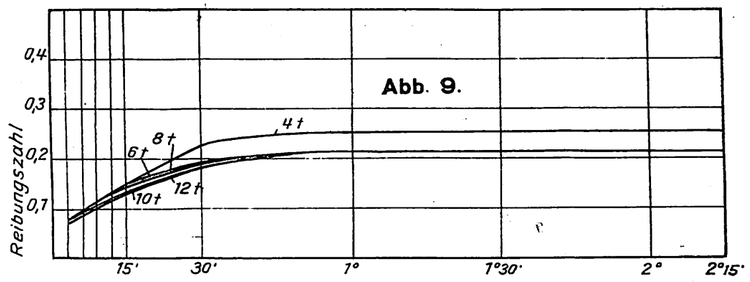

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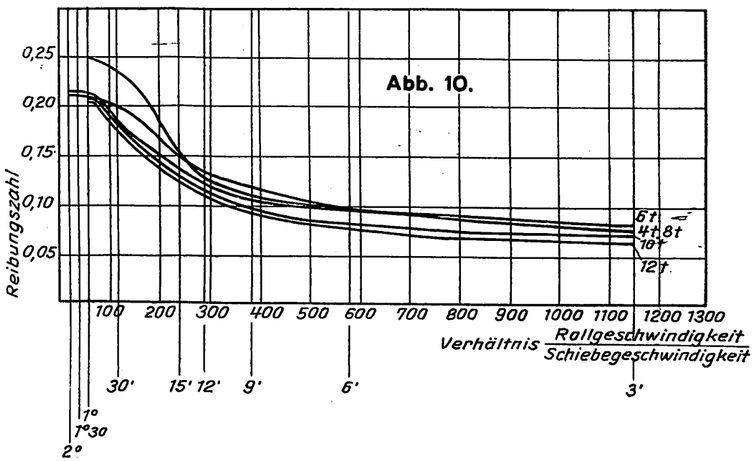

Abb. 10.

Die Reibungszahl μ' der quergleitenden Bewegung rollender Räder von Eisenbahnfahrzeugen.

Versuche der Niederländischen Eisenbahnen.

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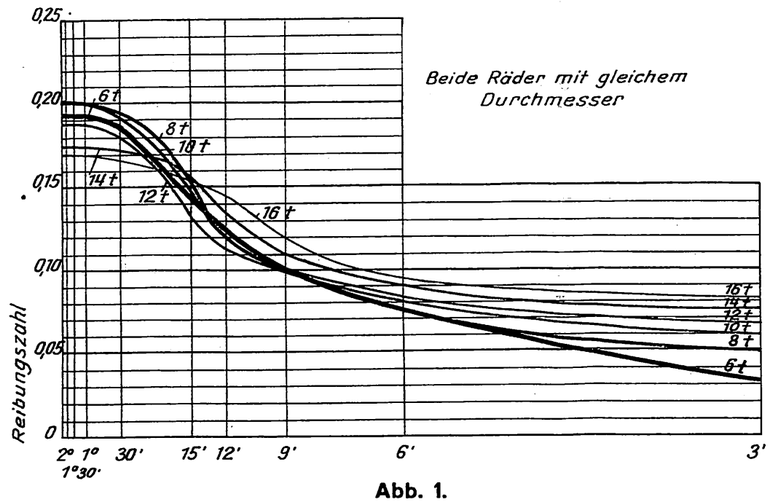
Versuche der Niederländischen Eisenbahnen am dreiachsigen Wagen der Regelspur.



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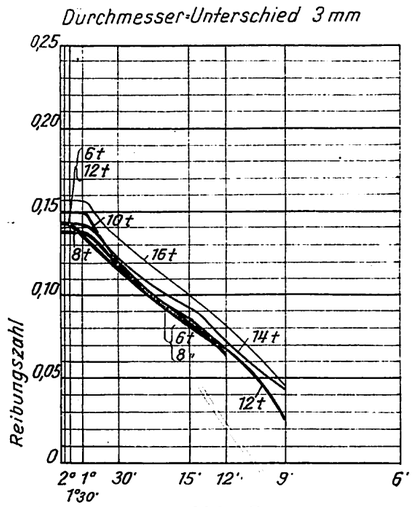

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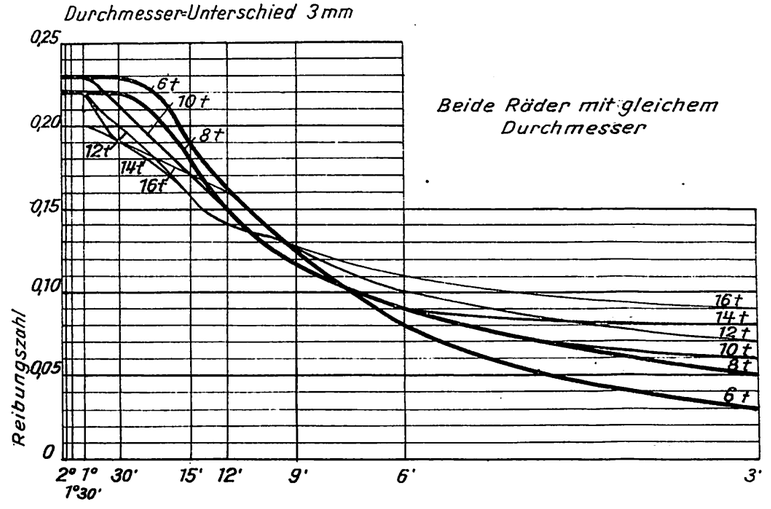

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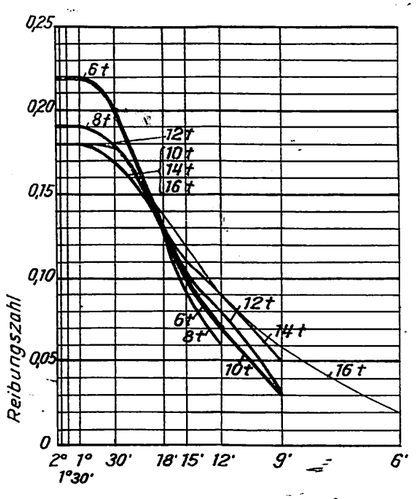

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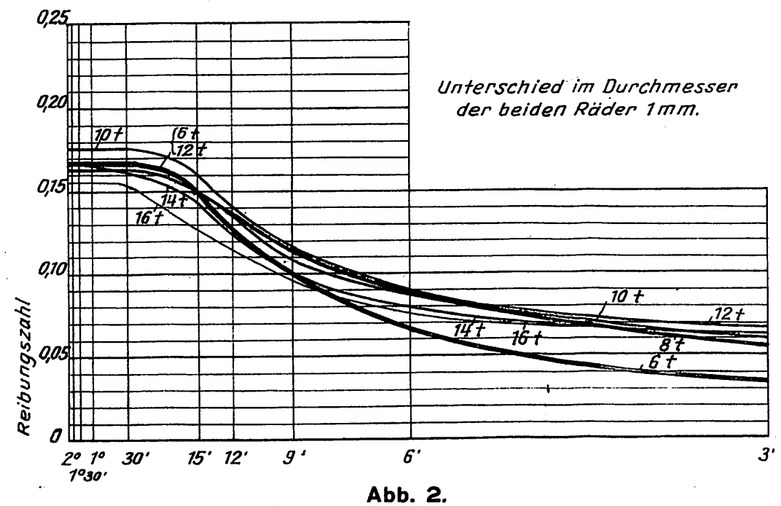

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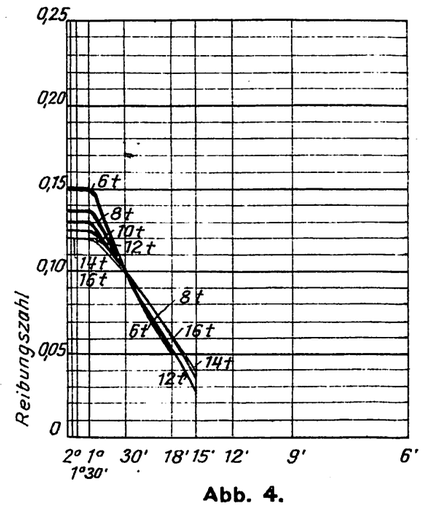

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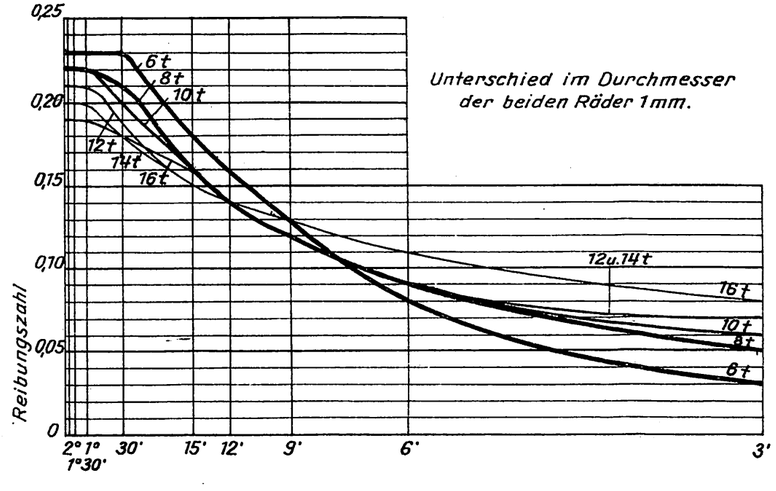

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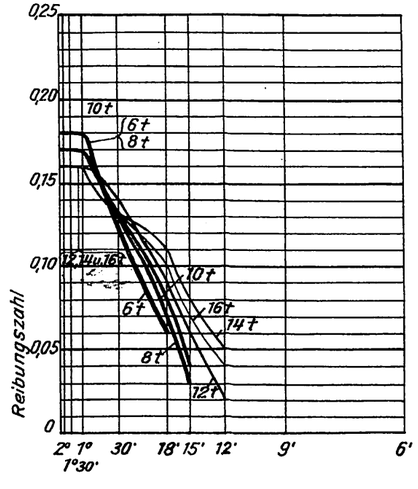

Abb. 8.

6 t Belastung — 12 t Belastung
8 t " — 14 t "
10 t " — 16 t "

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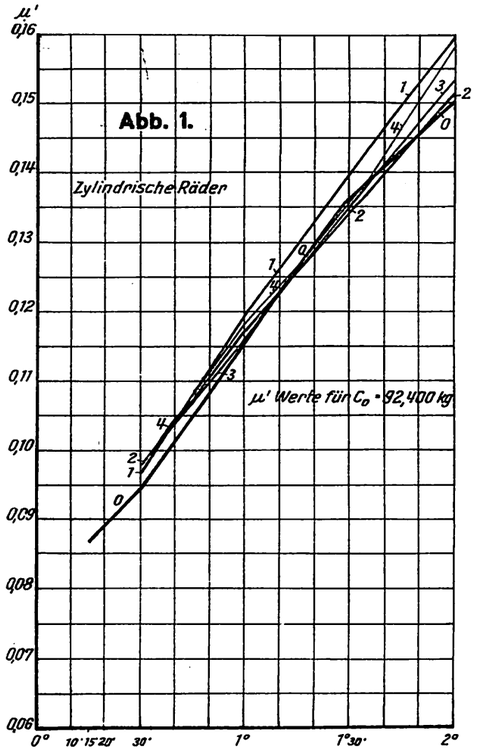
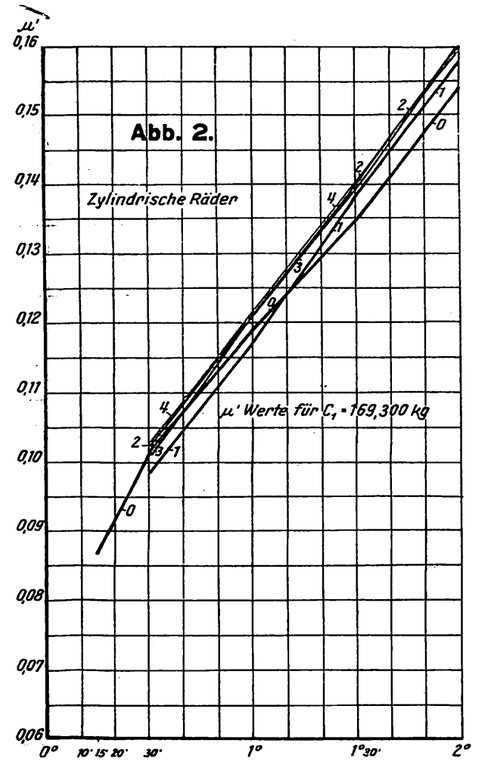
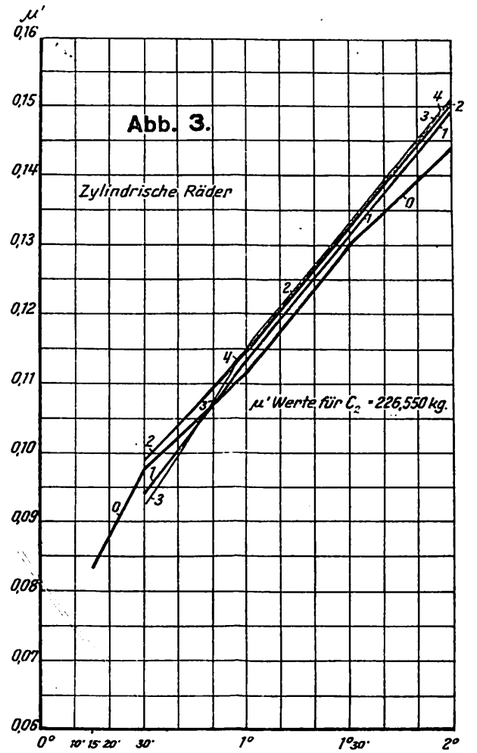
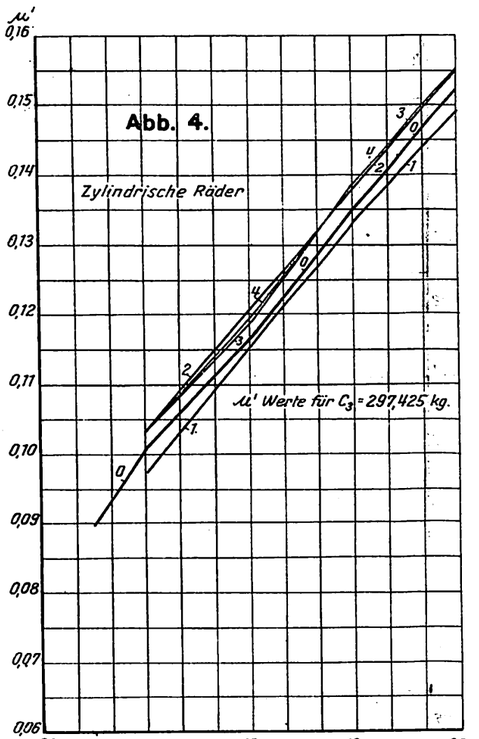
Die Reibungszahl μ' der quergleitenden Bewegung rollender Räder von Eisenbahnfahrzeugen. Versuche der R.B.D. Karlsruhe.

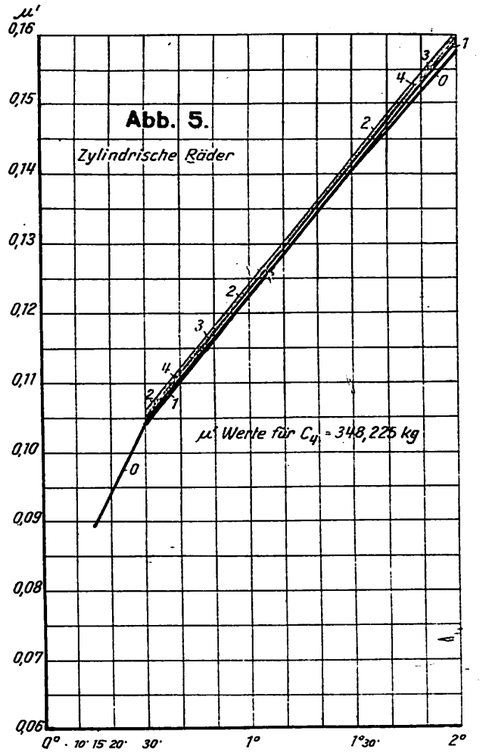
0 — 2 6 = 0 mm
1 — " = 2,5 mm
2 — " = 5,0 mm
3 — 2 6 = 7,5 mm
4 — " = 11,0 mm

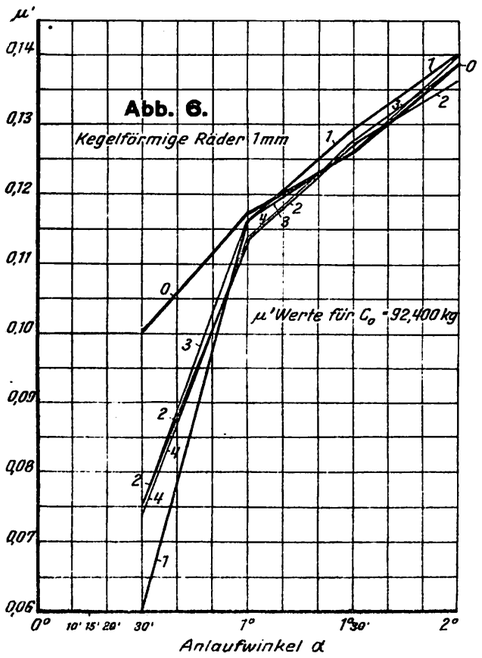


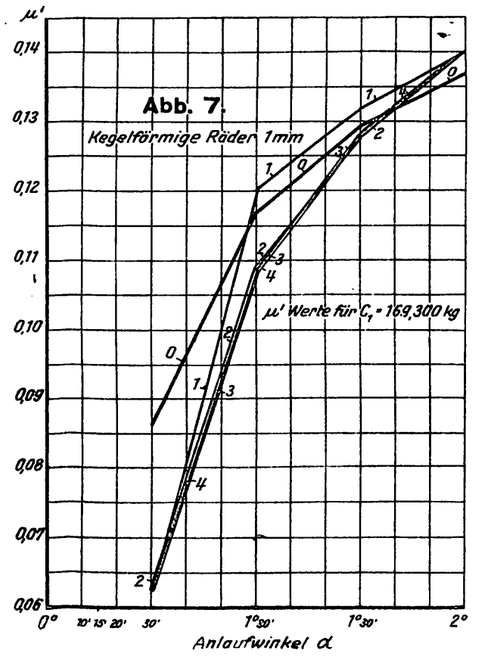


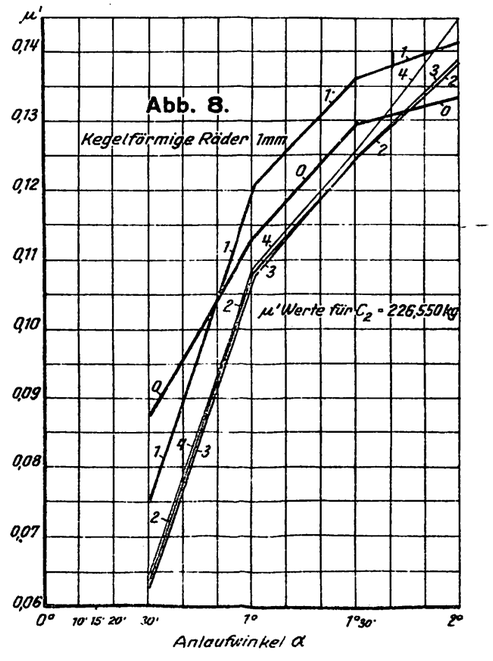


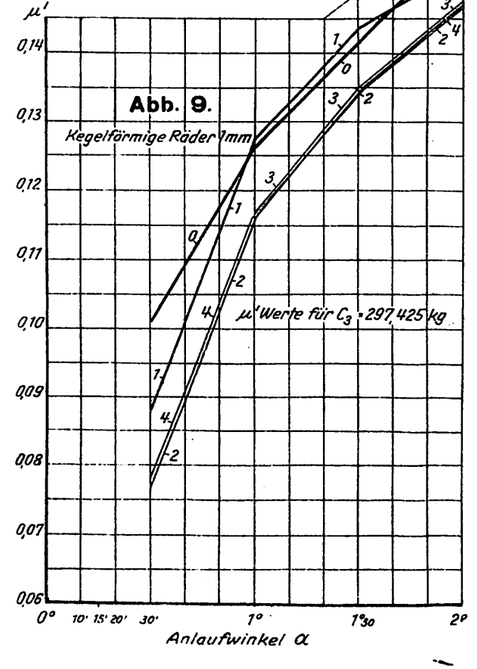


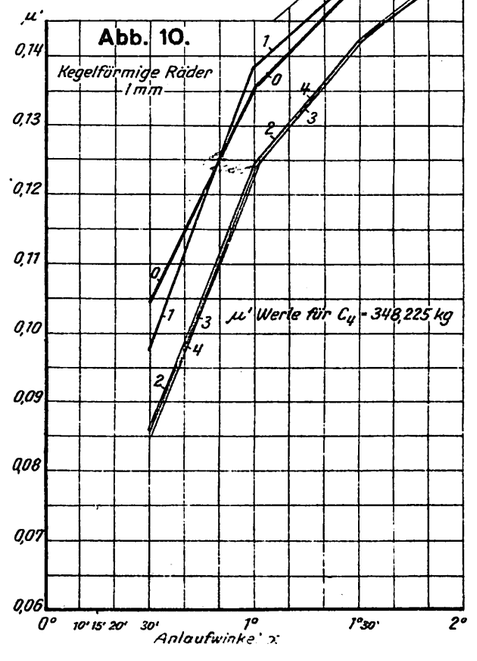












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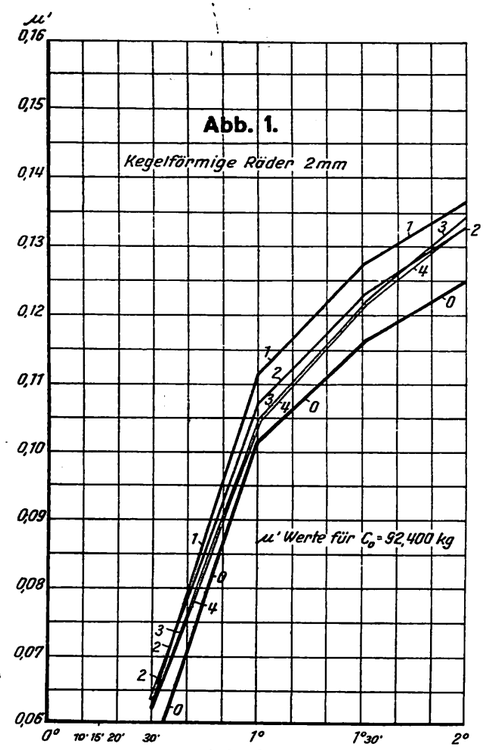
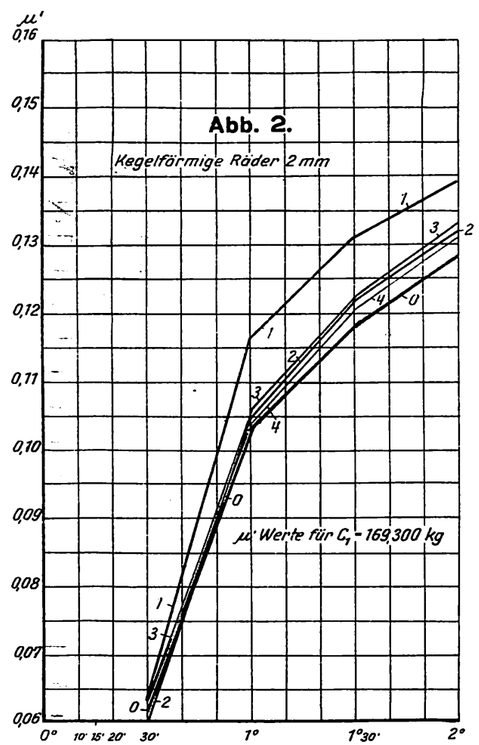
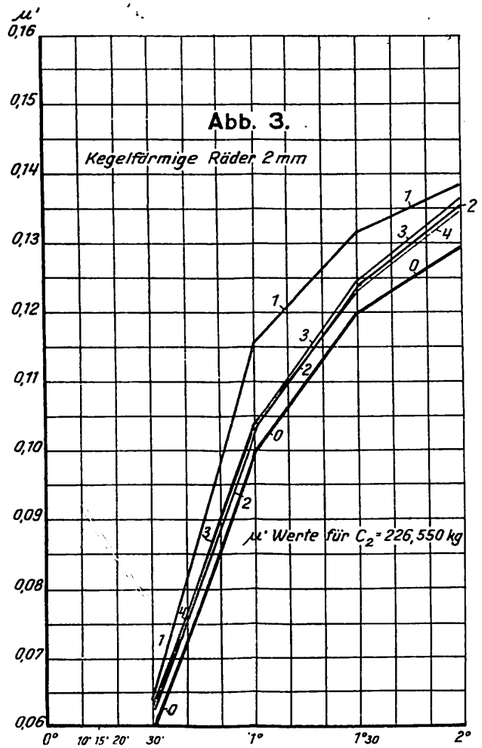
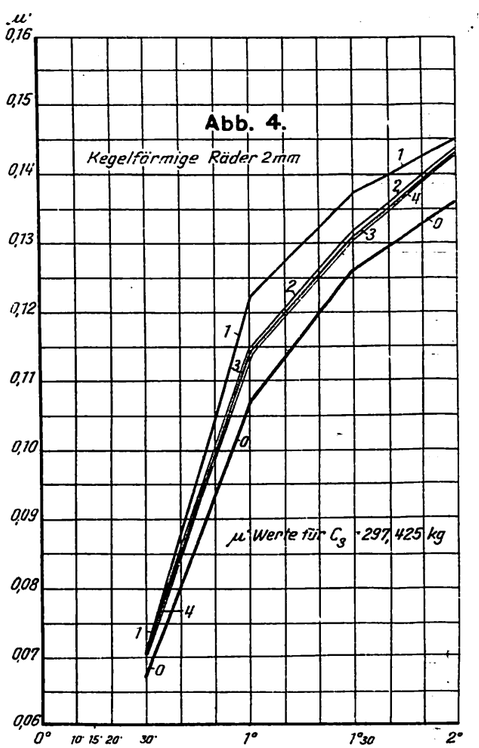
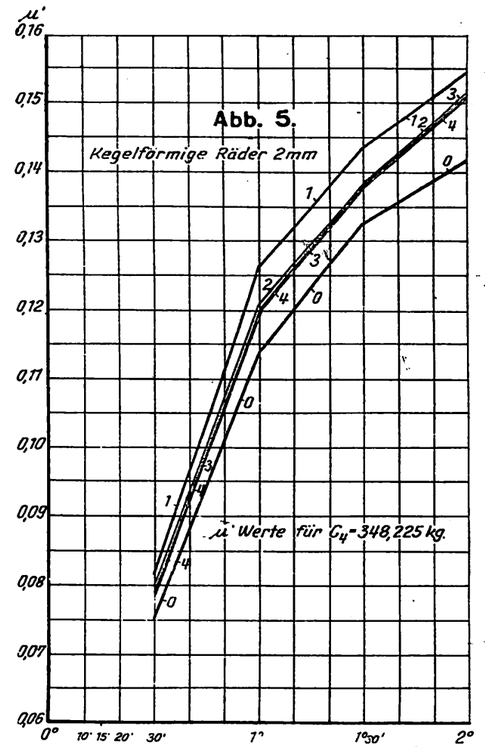


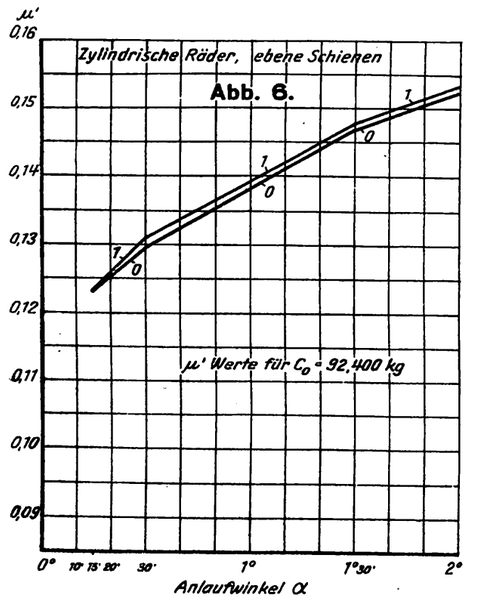


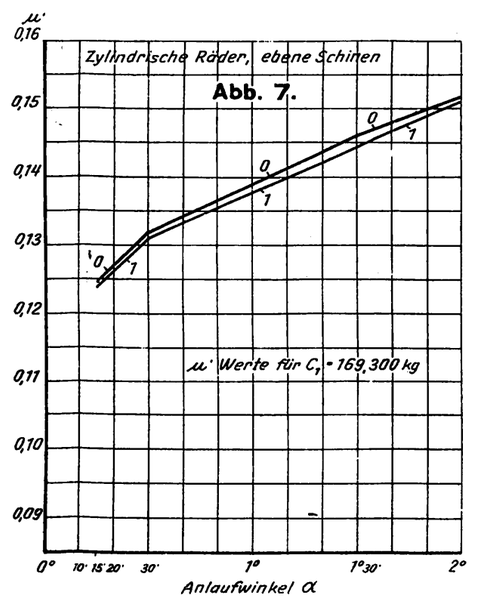


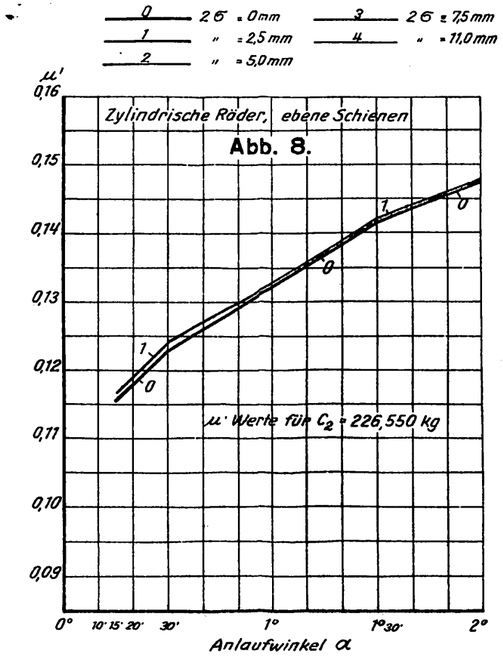


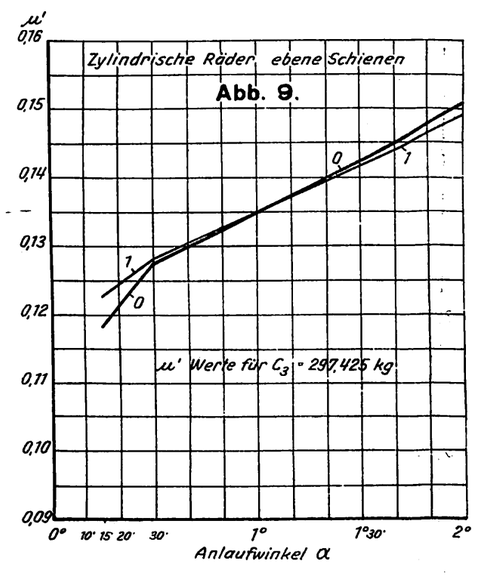


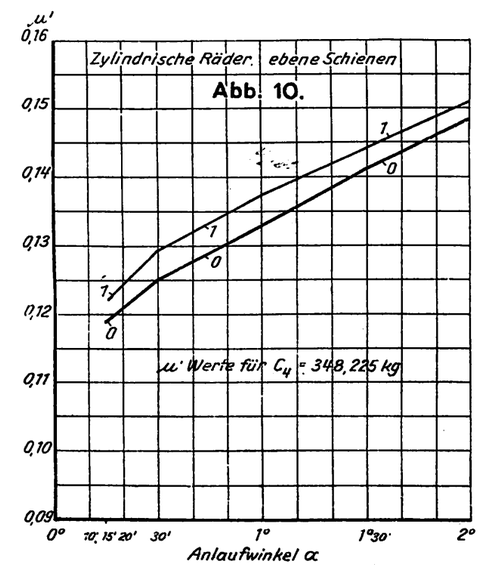
Die Reibungszahl μ' der quergleitenden Bewegung rollender Räder von Eisenbahnfahrzeugen. Versuche der R.B.D. Karlsruhe.











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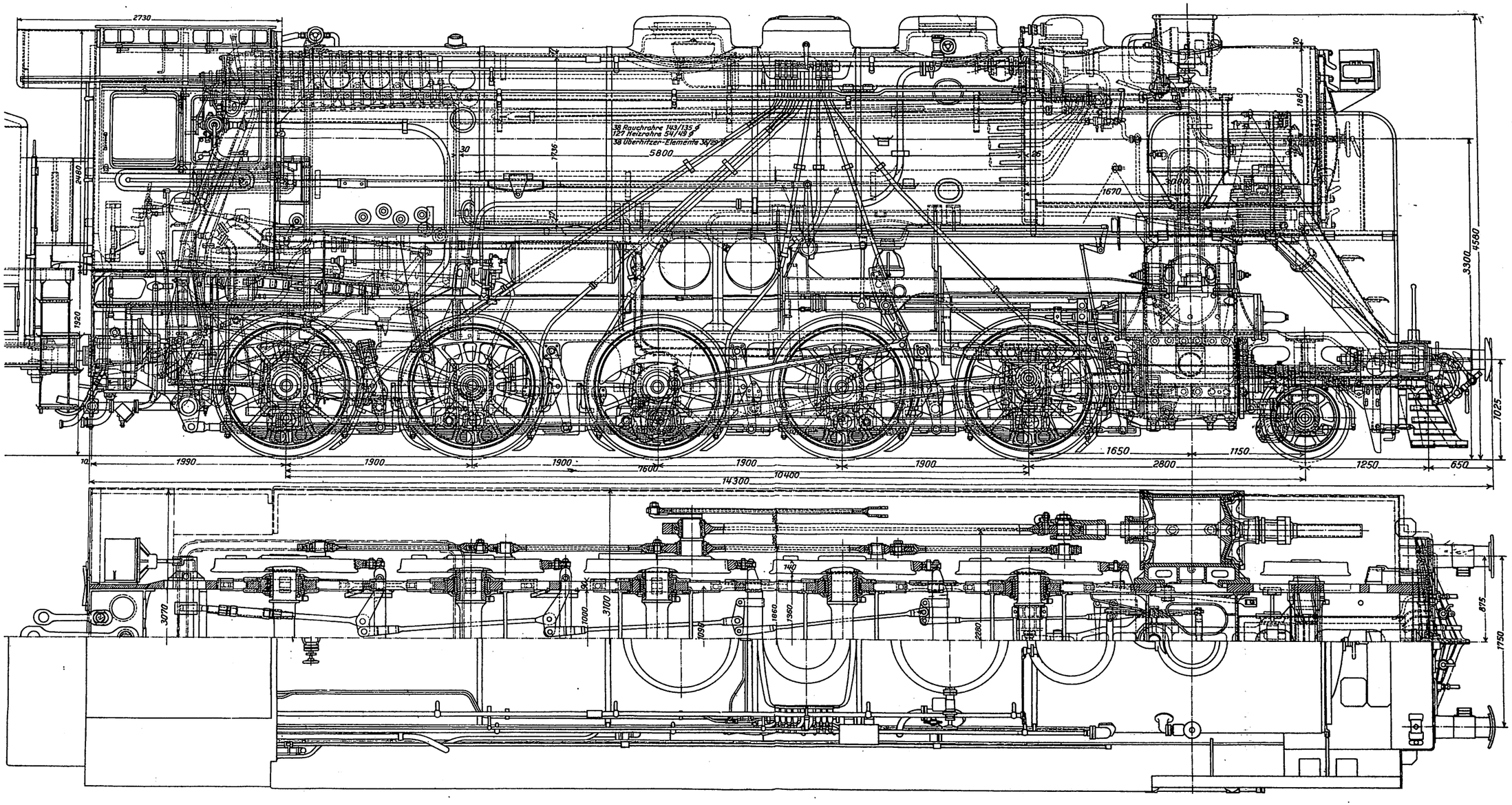

1E - Heißdampf - Personenzuglokomotive, Reihe 9 der Bulgarischen Staatsbahn.

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