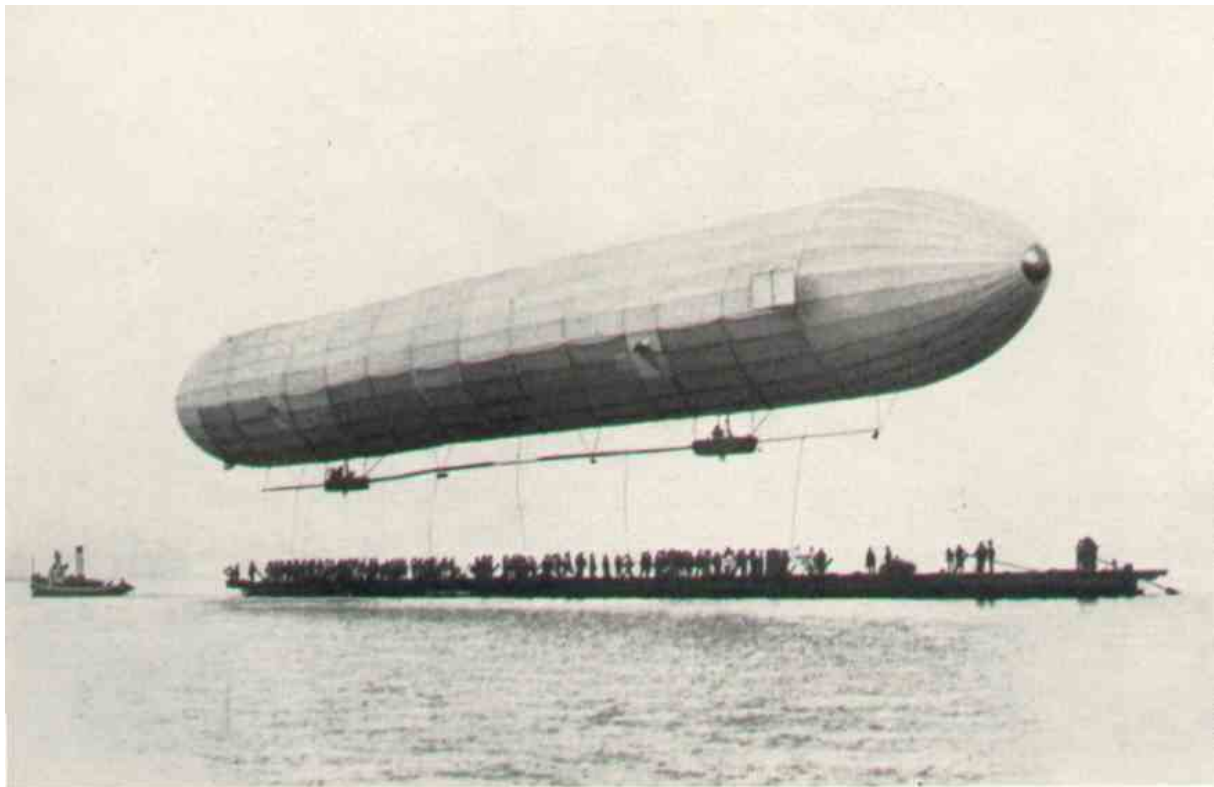


Zeppelin: The airship and the need for diversification after WW I (1918-1929)

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1. Zeppelin: From «inventors enterprise» towards a conglomerate

The origins of the Zeppelin company lie in the efforts of a noble man from Württemberg, Count Zeppelin, to construct a rigid airship. Over decades he spend much money and time to develop such a vehicle. In 1900, the first airship started from Lake Constance:

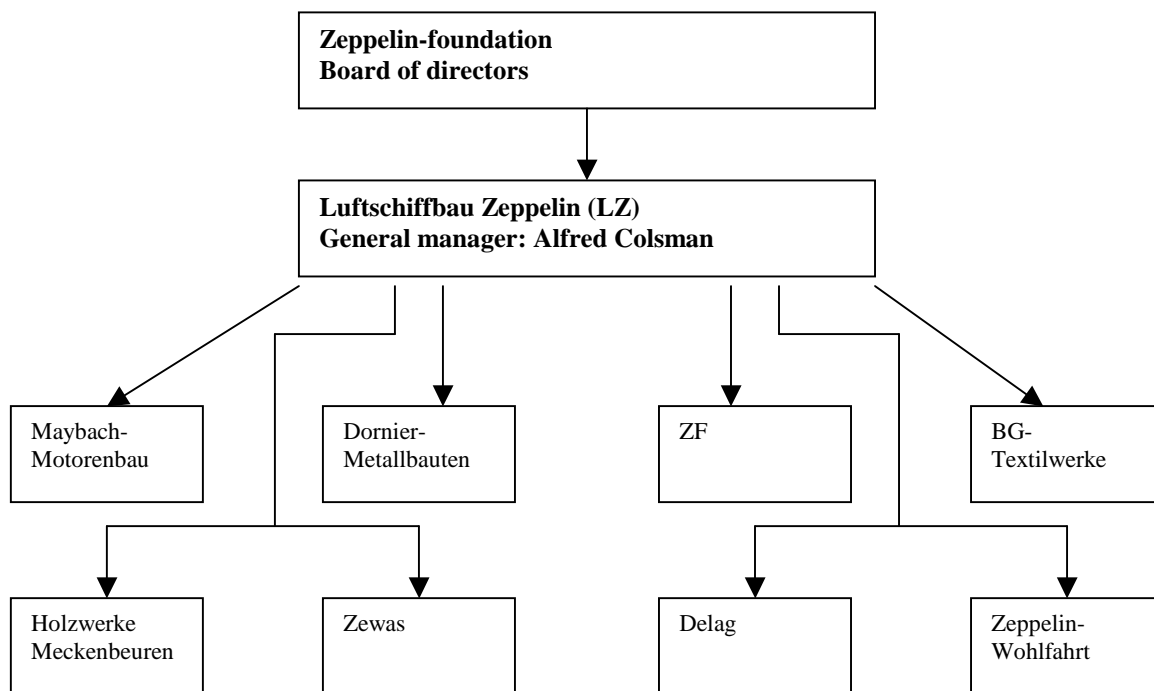


Zeppelin's maiden flight, 1900.

A turning point in the history of the airship was the catastrophe, which happened 1908 in the small village Echterdingen in Southern-Germany. The fastened Zeppelin LZ 4 broke away in the night, and was destroyed by a storm. But in the moment, when everything seemed to be over, a wave of patriotic sympathy swept over Germany and a big fund raising campaign generated enough money to build up a company with the purpose of constructing airships. In 1908, a foundation and a company were founded, and Count Zeppelin made Alfred Colsman,

member of a well known westfalian silk-producers family, the first general manager of the Luftschiffbau. Many subsidiaries were founded to fulfill the requirements of the technical extremely advanced development and production of airships. Which has formerly been merely some kind of «project-making», became more and more a complex conglomerate of different firms, some of them still known to this day:

Zeppelin 1918 (simplified):



The end of WW I brought about deep changes for the enterprise. Since the «epiphany of Echterdingen», the company was a favourite of the Germans and the German state. Most of all, as long as Count Zeppelin was alive (who died in 1917), the enterprise swam on a wave of patriotic enthusiasm.¹ Its financial independence led to the privileged situation, that it was able to develop high-tech largely independent from economical constraints. The very modern holding structure of the company was in principal some kind of institutionalised «project making».² It was an organisational framework for the attempt, to coordinate and administrate the largely independent activities of the constructing engineers and inventors with regard to a major project, the construction of airships.³ A real competition in this field did not exist. With

¹ Rolf Striedacher, *Anpassungsprozesse im deutschen Luftschiffbau nach dem ersten Weltkrieg. Das Beispiel Zeppelin* (Ms. Regensburg 1975, Archiv Zeppelin-Museum), 41.

² Cp. Markus Krajewski, *Restlosigkeit. Weltprojekte um 1900*, München 2006.

³ Alfred Colsman, *Luftschiff voraus! Arbeit und Erleben am Werke Zeppelins*, München 1983, 184.

Schütte-Lanz from Mannheim there was only one, much smaller enterprise, which build airships too.⁴

The war destroyed this friendly picture. First of all, the public demand led to a feverish expansion in the production of airships. The dockyards in Friedrichshafen and Berlin-Staaken manufactured in 1915 26, in 1916 24, and in 1917 at least 23 Zeppelins. But when it became obvious, that the airships were rather useless for military purposes, the demand sunk and in the end the Reich dropped out as a purchaser of the Zeppelins. Every sober thinking man had to face the fact, that the time of its military use was over.⁵ For this purpose, the airships were too big, too sedate, too vulnerable. The future of airship-production necessarily must be the civilian area (which had been the original goal of Count Zeppelin too). But in a «world of enemies» a civilian air-transport was an utopian thought. The treaty of Versailles forbid the production of airships for half a year, and because of defaulted acts of demobilisation this ban was maintained until 1922. It was a long time until 1926, when the air-conference in Paris decided the suspension of the restraints, which had forbidden the manufacturing of airships with a volume of more than 30.000 cbm.⁶

So after the war, the enterprise had to look for new ways to save its survival. This could, de facto, mean nothing else than to diversificate the production and to commercialise the technical know-how aside from the airship. The enterprise had to become independent from public demand. This was the project Alfred Colsman started in 1918 and which was indeed a complicated task. It took advantage from the technical knowledge gathered in the company, which were not only represented by gifted inventors like Karl Maybach or Claude Dornier, but to the same degree by a fundus of skilled workers. On the other side, the Zeppelin-concern had to sustain its position as a newcomer on highly competitive markets (e.g. aluminium), or markets which were still nascent (like automobile industry) .

The diversification was overshadowed by conflicts inside the company. Whilst Alfred Colsman strived for the saving of the company's economical survivability, others wanted to maintain the constructions of airships and save the heritage of Count Zeppelin by all costs. The most important agent of this party was Hugo Eckener, who was elected in the board of the foundation in 1920 and replaced Colsman by and by as the leading person in the company. This conflict between Eckener and Colsman should shape the history of Zeppelin until the

⁴ Concerning Schütte-Lanz cp. Reiner Meiners/Lioba Meyer/Dieter Post, *Unternehmensgeschichte Luftschiffbau Schütte-Lanz*, in: Zeppelin-Museum Friedrichshafen (Hrsg.), „Im Schatten des Titanen“. Schütte-Lanz, Friedrichshafen 2001, 41-72.

⁵ Max von Gemmingens thought, that the failure of the Zeppelin was due to the army's misunderstanding of its special character. Letter Herrn Dr. Freiherr von Gemmingen to N.N. (30.5.1919). StA Fr 3/Nr. 347.

⁶ Lutz Budraß, *Flugzeugindustrie und Luftrüstung in Deutschland 1918-1945*, Düsseldorf 1998, 28 f.

retirement of the latter in 1929: it was not merely about a conflict between two very different men, but between two very different conceptions of how to govern and finance the company, which business strategy it should follow and which goods it should produce.

2. Revolution in Friedrichshafen and the restructuring of the company

The end of the war in Friedrichshafen was overshadowed by revolutionary quarrels. During the war, the number of employees were grown to over 10.000, and this mass of workers on a very narrow space caused grave tensions, which worried the authorities of the state Württemberg.⁷ In Elmar Kuhns opinion, Friedrichshafen was one of the germ cells of the German revolution, which culminated in the proclamation of the republic on 9th November 1918.⁸ Financial constraints led to a tightening of the situation. The enterprise wanted to reduce the staff and offered a compensation to the workers.⁹ Thus, the number of employees sunk fastly from 12.000 to under 6.000¹⁰, even though this efforts were slowed down by the demobilisation regulations. Indeed, this strategy brought about new conflicts and fueled the loaded atmosphere in Friedrichshafen. Alfred Colsman described in his autobiography some tumultuary meetings, which made him fear for his personal safety.¹¹

When the situation in Friedrichshafen had calmed down, another question came to the fore: how the production should go on? The Zeppelins, manufactured during WW I, had to be broken up. After the war, the Friedrichshafen dockyard had constructed two more airships, the «Bodensee» (Lake Constance) and the «Nordstern» (Northern star), with whom the DELAG in 1919 attempted to build up a line operation between Friedrichshafen and Berlin respectively the scandinavian countries.¹² Indeed, this business did not generate money. Quite the contrary: to cover the running costs the company had to throw 500.000 Goldmark in.¹³ By the inception of the peace treaty in early 1920, the production of airships had to be put on hold. The «Bodensee» and the «Nordstern» had to be delivered to the German state in June 1921, and the latter payed for them in rapidly value-losing papermoney, so there was only a minimal compensation. But Colsman thought that also without the allied sanctions, the enterprise had to strive for new possibilities, to become independent from the airship. Already

⁷ Colsman, *Luftschiff voraus!* (Fn. 3), 207.

⁸ Elmar Kuhn, *Friedrichshafen in der Weimarer Republik*, Friedrichshafen 1986, 55.

⁹ Report of Gustav Burr (January 1958): *Wie ich zu Maybach kam und wie es weiterging*. LZA 06/0710.

¹⁰ Striedacher, *Anpassungsprozesse* (Fn. 1), 81.

¹¹ Colsman, *Luftschiff voraus!* (Fn. 3), 208 f.

¹² Business report Luftschiffbau Zeppelin GmbH 1919. LZA 05/0192.

¹³ Letter from Alfred Colsman to Hildebrandt (17.10.1928). LZA 06/0121.

in 1917, he had discussed plans with Karl Maybach to produce motors for cars and utility vehicles in Friedrichshafen.¹⁴ The subsidiaries, which heterogeneous productions were linked by the complex product Zeppelin, had to open up new outlets. The aluminium-casting house e.g. begun to manufacture cookware, which was not very successful. In early 1921, this production was given up and the firm dared to manufacture complicated castings for industrial purposes. This was a delicate business with fluctuating incomes, so the casting house sometimes made good profits and was in other times only one step away from closing down.¹⁵ The big halls for the production and service of airships in Berlin-Staaken were rented for filmshootings.¹⁶ The Ballonhüllengesellschaft became the BG-Textilwerke in Berlin-Tempelhof, specialised in technical textiles. The «Zewas» in Berlin-Staaken produced hydrogen for an industrial demand, which were formerly needed to fill the airships.¹⁷ To the point of wood workings and butter production the company included a broad product segment. But one thing seemed to be clear: without the focus on the Zeppelin, the connection between the subsidiaries had to get lost.

All this foundings and rededications were intended as temporary solutions to seize raw materials and facilities, and create incentives for the skilled workers to stay with the company. But the hope for a successful diversification were carried on by three subsidiaries: namely the Zahnradfabrik Friedrichshafen (ZF), the Maybach-Motorenbau and the Dornier-Metallbauten. The Zahnradfabrik Friedrichshafen was founded in 1915 to develop and produce special reduction gears for Zeppelin engines. In 1918, the subsidiary had about 600 employees,¹⁸ but also in this case the end of the war implicated a standstill. In 1919, the ZF changed to the production of gears for cars and attempted to benefit from the «boom» of automobiles after the war.¹⁹ Indeed, this was a difficult business as well, because most of the car-manufacturers preferred to construct their own gears. The wide-spread individualism in this branch prevented the implementation of uni-gears, which would have made a serial-production possible. Another problem was, that the ZF-gears were extremely sensible and for this reason not suitable for sometimes very bumpy streets

Combined with the necessary high investments to build up the ZF, this factors led to a disastrous financial situation. The director and leading engineer of the firm, Alfred von Soden, judged its financial situation as merely «embarrassing». However, he continued to

¹⁴ Wilhelm Treue/Stefan Zima, *Hochleistungsmotoren. Karl Maybach und sein Werk*, Düsseldorf 1992, 32 f.

¹⁵ Report of the Casting house on the business year 1920. LZA 05/0194.

¹⁶ LZ GmbH, monthly report März 1923. LZA 05/0198.

¹⁷ Hans G. Knäusel, *Unternehmen Zeppelin. Geschichte eines Konzerns*, Bonn 1994, 79 ff.

¹⁸ Colman. *Luftschiff voraus!* (Fn. 3), 206.

¹⁹ Cp. Reiner Flik, *Von Ford lernen? Automobilbau und Motorisierung in Deutschland bis 1933*, Köln 2001, 131 ff.

invest in the plant and to hire workers (in 1920, the number of employees mounted up to 570), because he perceived this as necessary for a serial production of premium gears. His estimation was, that the shareholders (the LZ and Maag from Zürich) could not drop the ZF because of the huge amount of capital they already had invested. But not at least the inflation brought about a situation with only two options left: financial restructuring or insolvency. Colsman had always pleaded for the ZF, but it was the decisive question if the ZF would ever be able to survive autonomously or would continuously depend on the holding company's financial aid. As a result of long negotiations, a reorganisation plan was created in 1921. It envisaged the ZF's conversion into a stock-holding company, and the LZ should become the biggest shareholder.²⁰

The second subsidiary, the Maybach Motorenbau, did not gain momentum too. During the late war the company had produced a high number of motors for airplanes, manufactured by the Zeppelin concern. In 1918, 3.600 people worked for Maybach, much more than for the Luftschiffbau. After the war, the staff had to be reduced in a massive way. The company merely repaired vehicles and produced engines for motor bikes and bicycles, which came in fashion after the WW I.²¹ Thereafter, Maybach pursued two strategies: On the one side, it developed and produced heavy duty engines for traction units, busses and motor boats. On the other side, it manufactured premium class cars. Both segments did not prosper: the Maybach automobiles sold rather badly, even if some test runs were a big public success. Because of their advanced price they fastly were reckoned as an absolute luxury good. In case of motor manufacturing the company had to face the same problems as the ZF. Most producers of busses, like MAN, preferred to construct their own engines instead of buying them from an external firm. Experts considered the technical quality of Maybach engines as extremely high, but this had to get around firstly. In opposition to the ZF, the Maybach-Motorenbau did not get these difficulties under control during the whole 1920s and achieved in no more than three accounting years a profit.²²

The third hopeful subsidiary were the Dornier-Metallbauten (the title of the Zeppelin-plant Lindau since 1922). Colsman thought highly of the aircraft designer Claude Dornier and made big sums available to him to develop new airplanes. The Allied initially forbid the production of airplanes too, which was particularly dramatic because the enterprise had a big hope for an air-transport with Dornier-airplanes, in Colsman's opinion «up to now the best in the

²⁰ Rudolf Herzfeldt, *Geschäft und Aufgabe. 50 Jahre Zahnradfabrik Friedrichshafen*, Wiesbaden 1965, 101 ff.

²¹ Roman Köster, „Schauspielhaus Oberursel“. *Die Geschichte der Motorenfabrik Oberursel in den Jahren 1918-1956*, in: *Zeitschrift für Unternehmensgeschichte* 1/2004, 67-92, 71 f.

²² Kuhn, *Friedrichshafen in der Weimarer Republik* (Fn. 8), 18 f.

world».²³ The alternative was to dislocate the production away from Germany. After a less successful attempt to open up a plant in the Swiss town Rohrschach,²⁴ in 1921 the company bought a work in Marina di Pisa (Italy). During the next years, the Dornier Metallbauten produced under the label SAI giant flying boats like the «Dornier-Wal» and airplanes like the «Libelle» (dragonfly) or «Komet» (comet). Orders were placed by customers from the whole world: Argentina, Russia, Spain, and many others.²⁵ Additionally, the German state paid some subsidies. Finally, the Dornier-Metallbauten did not generate overwhelming profits, but were, in contrast to other subsidiaries, no financial burden to the company.

The Zeppelin-concern had to struggle after 1918. During the war, it had accumulated substantial profits and, more important, a huge material stock. The sale of a huge area to the city of Potsdam in 1921 was a big financial relief.²⁶ So the company benefited from the reinvestment of high war-margins into value assets.²⁷ Therefore it was possible to compensate the losses of the subsidiaries, but it seemed to be clear, that this cross-subsidiation inside the concern could not work in the long run.²⁸ Communication became a sour note. Claude Dornier reported in his autobiography, as long as Count Zeppelin was alive, his salary had been enhanced from time to time, without it was necessary to ask for it. This did not work any longer and the a little bit «unworldly» engineer Dornier had to demand a rise. Obviously, he did not like that.²⁹

The concerns management saw no alternative to the restructuring of the company, which was in their opinion not only enforced by the constraints linked with the treaty of Versailles. In Colman's opinion, there was no possibility for a profitable construction and operation of airships: «In younger years, I founded the Delag in the erroneous belief in a possible profitability of an air transport. In the meantime enlightened, I tried to fight this superstition. But for a long time, I was the voice of one crying in the wilderness.»³⁰ There are some reasons to suggest, that Colman's disbelief in the profitability of an air transport with Zeppelins was not always as firm as this statement suggests.³¹ But he wanted to make the company economical independent from the airship. However, the question, if (and under

²³ Letter Alfred Colman to Merck (2.9.1920). LZA 06/0109.

²⁴ Lutz Budraß, *Rohrschach und Dornier. Zwei Unternehmen aus dem Zeppelin-Flugzeugbau in der Weimarer Republik und im Nationalsozialismus*, in: Wolfgang Meighörner (Ed.), *Zeppelins Flieger. Das Flugzeug im Zeppelin-Konzern und seinen Nachfolgebetrieben*, Friedrichshafen 2006, 203-235, 207.

²⁵ LZ GmbH, Monthly Report March 1923. LZA 05/0198. LZ GmbH, Monthly Report May 1923. LZA 05/0200.

²⁶ Colman, *Luftschiff voraus!* (Fn. 3), 163.

²⁷ Letter Alfred Colman to Hildebrandt (1928). LZA 06/0121.

²⁸ Striedacher writes, that the LZ had the task of a "house bank" inside the company. Striedacher, *Anpassungsprozesse* (Fn. 1), 58.

²⁹ Claude Dornier, *Aus meiner Ingenieurslaufbahn*, Zug 1966, 157f.

³⁰ Colman, *Luftschiff voraus!* (Fn. 3), 199.

³¹ Letter Alfred Colman to Regierungsrat Biser (20.11.1928). LZA 06/0120.

which circumstances) the company would continue to craft airships ought to be the decisive conflict inside the concern. The construction of Zeppelins could not be abandoned as easy as the production of nails or cookware: A work of a lifetime was on stake. Indeed, when the state had stopped to finance the airship, who would pay for the continuation of Count Zeppelin's life dream?

3. The resumption of airship-manufacturing after WW I

Colsman wrote in his autobiography, it has been «false prophets» which had propagated the profitability of airship-production after WW I.³² A close reading shows, that Colsman blamed mainly one person, Hugo Eckener, who deeply believed in the future of the Zeppelins and became Colsmans big antagonist inside the company. Eckener, a former journalist and chairman of the DELAG (a predecessor of the Lufthansa), had trained aviators for airships in the last years. During this time, it became clear that Colsman was not the man who would put through the construction of airships against all resistances. Additionally, Colsman and Count Zeppelin had grown away from each other.³³ After the Count's death in 1917 his widow wrote deeply worried to Eckener, what would happen to his life work.³⁴ She «authorised» him effectively, to do everything to save her husbands heritage.

However, Colsman was not principally hostile to the airship. In 1920, he traveled to the United States to sound the interest concerning the construction of new airships financed by American firms (Goodyear, Ford). But that the American counterparty waited in anticipation (the Zeppelin-Goodyear Corp. was founded not until 1923) tightened Colsmans scepticism. In opposition to him, Eckener did not only believe in a possible profitability of a commercial air-transport with Zeppelins, but saw the airships as the future of commercial air-transport in general and himself as the fullfiller of Count Zeppelins life work.³⁵ Reluctantly he had to accept in the 1920s, that the airplanes became much more advanced concerning speed, flexibility and production costs.³⁶ But as long as the airplanes had conventional engines, in his opinion the airship had considerable advantages on long distances. Furthermore, people considered travelling by Zeppelins as much more enjoyable and comfortable, whilst an

³² Colsman, *Luftschiff voraus!* (Fn. 3), 199.

³³ *Ibid.*, 139, 112.

³⁴ Rolf Italiaander, *Ein Deutscher namens Eckener. Luftfahrtpionier und Friedenspolitiker. Vom Kaiserreich bis in die Bundesrepublik*, Constance 1981, 153.

³⁵ *Ibid.*, 197 ff.

³⁶ Hugo Eckener, *Im Zeppelin über Länder und Meere. Erlebnisse und Erinnerungen*, Flensburg 1949, 36. Kuhn, *Friedrichshafen in der Weimarer Republik* (Fn. 8), 38.

airplane bounced and brawled, reeked of oil and petrol, and had often accidents (which, indeed, happened to airships too).³⁷ Eckener remarked in an address to airplane aviators in 1925: you are all brave men, but you bet on the wrong horse: the Zeppelin has much better prospects!³⁸ With this strong belief, Eckener felt called to challenge the powerful Colman at the top of the firm.

Eckener thereby benefited from the construction of the concern. The Zeppelin-foundation was officially the dominating body, but it had little relation to the activities of the enterprise. Under Colmans leadership the foundation had become more and more an «old mens club» without any influence. After the death of Count Zeppelin, his son-in-law, Count Brandenstein-Zeppelin, demanded access to the business records and a seat in the board of directors.³⁹ But the entourage of noble men gathered in the foundation, with Baron Bassus as its frontman, principally lacked the economical expertise to confront Colman.⁴⁰ Count Brandenstein-Zeppelin, for example, sounded rather helpless when he wrote to the board of directors in 1920 (in the face of increasing losses): «I am not capable to assess whether we can dismiss workers when in a few months we have to be in the position to manufacture a high-class product, an airship.»⁴¹ Furthermore, the social circumstances were extremely unstable. In times of strikes and riots the noble men preferred not to intervene in the company's business.⁴² But nevertheless existed a big dissatisfaction inside the foundation concerning the manner, how Colman governed the company. Max von Gemmingen expressed in 1919 the hope, that the manufacturing of two airships after the war had shown, that diversification was just a short-time phenomenon: «After the end of the war, which had transformed the undertaking of Count Zeppelin merely into a building yard, which had founded some necessary subsidiaries, the underlying purpose of the Zeppelin-enterprise, the development and advancement of air-transport, will come to the fore again, whilst the economical side will recede as a means to an end.» Zeppelin would soon recapture its character as an «inventors enterprise» (sic!).⁴³ The possibility, that the makeshifts of the post-war period could survive in perpetuity, seemed to be very uncomfortable to the old companions of Count Zeppelin. Furthermore, the foundation's shareholders and the bourgeois clerk Alfred Colman did not like each other as

³⁷ Guillaume De Syon, *Zeppelin! Germany and the Airship 1900-1939*, Baltimore 2002, 133. Italiaander, *Ein Deutscher namens Eckener* (Fn. 35), 144 ff.

³⁸ Italiaander, *Ein Deutscher namens Eckener* (Fn. 35), 246.

³⁹ Letter Ernst Uhland to Mrs. Countess Zeppelin (3.7.1918). LZA 06/0045. Letter Ernst Uhland to Mrs. Countess Zeppelin (28.2.1919) LZA 06/0046.

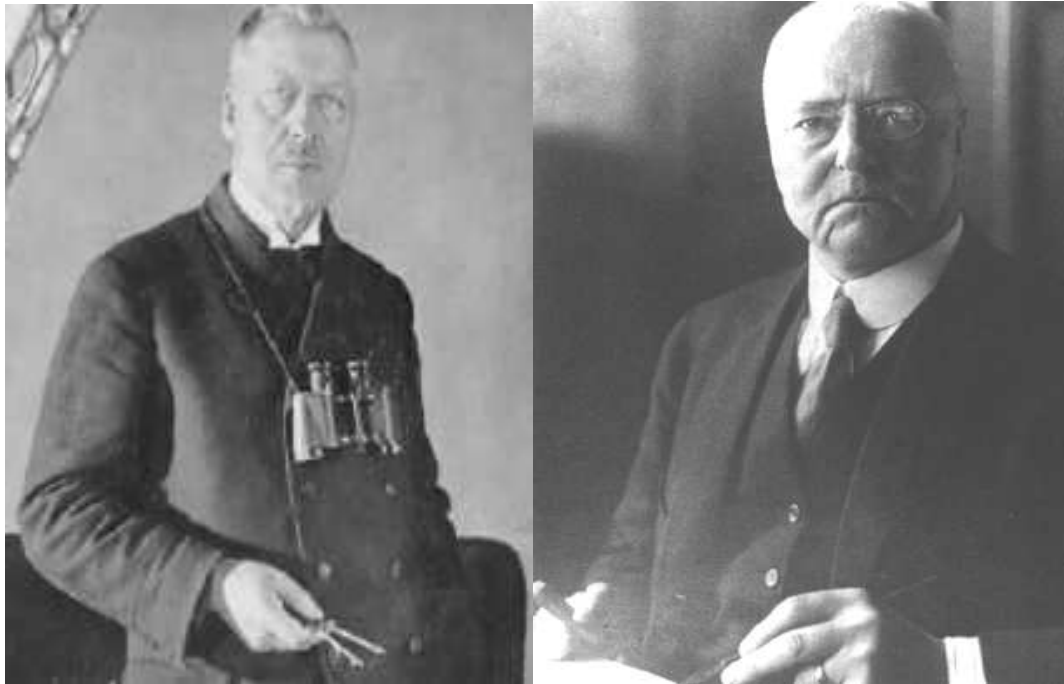
⁴⁰ Letter Max von Gemmingen to Dr. Schützing (29.4.1920). StA Fr 3/Nr. 364. Cp. Italiaander, *Ein Deutscher namens Eckener* (Fn. 35), 200f.

⁴¹ Letter Graf von Brandenstein-Zeppelin to board of directors Zeppelin-foundation (3.6.1920). StA Fr 3/Nr. 364.

⁴² Concerning this conflict: Horst-Oskar Swientek, *Alfred Colman (1873-1955). Ein Leben für die deutsche Luftfahrt*, in: *Tradition* 10 (1965), 112-126, 122 f.

⁴³ Letter Freiherr von Gemmingen to N.N. (30.5.1919). StA Fr 3/Nr. 347.

well. In the internal correspondence of the Zeppelin-foundation Colsman was merely called «Mister C.» or even «Mister X.».⁴⁴



Hugo Eckener and Alfred Colsman

These tensions were decisive for Eckener's career inside the Zeppelin-company. He was energetic and experienced in the field of air-transport. By his work for the Delag he was well versed in business issues and he had, as said before, a strong belief in the future of the airship. He perceived the diversification of the concern rather sceptical and tried to decry it as the production of «pots and pans».⁴⁵ Therefore, he was the appropriate person to enforce the interests of the shareholders. In June 1920, Eckener was elected into the board of the Zeppelin-foundation.⁴⁶ In September the same year, he formulated a memorandum about a possible restructuring of the concern, which aspired to strengthen the foundation's influence and to ensure that the company would follow the purpose defined in its articles.⁴⁷ This meant nothing else than the manufacturing of Zeppelins and in the aftermath Eckener should constantly invoke on § 3 of the articles, which codified the advancement of the airship and air-transport as the main purpose of the Zeppelin-concern.⁴⁸

⁴⁴ Letter Count Brandenstein-Zeppelin to Max von Gemmingen (28.9.1920). Letter Count Brandenstein-Zeppelin to the Zeppelin-foundation (3.6.1920). StA Fr 3/Nr. 364.

⁴⁵ De Syon, *Zeppelin!* (Fn. 38), 128.

⁴⁶ Letter board of directors Zeppelin-foundation to the chairman of the shareholders of LZ Zeppelin (14.6.1920). StA Fr 3/Nr. 364.

⁴⁷ Letter General manager of the Zeppelin-foundation to the board of directors of the Zeppelin-foundation (Draft Dr. Eckener, Sept. 1920). StA Fr 3/Nr. 364.

⁴⁸ Swientek, *Alfred Colsman* (Fn. 43), 122 f.

Barely accidentally, Eckener's appointment into the board of directors coincided with the point in time, when the ban of airship construction should expire (nobody could guess that the Allied should maintain the prohibitions over the next few years).⁴⁹ This caused a grave conflict between Eckener and Colsman in the autumn of 1920.⁵⁰ Eckener accused Colsman of an autocratic management style and tried to downplay the high wartime profits by saying that even a child could have achieved them, due to the public demand.⁵¹ Colsman on the other side perceived the resumption of the airship-production as a financial nuisance.

In spite of the fact, that the Allied banned the production of Zeppelins beyond the summer of 1920, Eckener found a possibility to produce an airship. But therefore he had to take a considerable risk and the decision on the construction of the so-called «Reparationsluftschiff» (reparations airship) emerged to the decisive «showdown» between him and Colsman. On October 12th 1924, the airship LZ 126 started in Friedrichshafen, constructed by Ludwig Dürr and under the lead of Eckener. After an 81-hour journey it arrived at its port of destination, Lakehurst (USA).⁵² The Zeppelin over Manhattan is properly one of the most impressive pictures of the Zeppelin ever made. Eckener received a hero's welcome in New York and the German people celebrated him in a still more euphoric way. In the aftermath of the lost war the Zeppelin's atlantic crossing appeared to the German people as some kind of national «ressurrection».⁵³ The «myth» Eckener is not to explain without the atlantic crossing, and in a very short time he became one of most popular Germans. In 1932 for instance, some people thought about his possible candidacy for the 1932 presidential elections.

⁴⁹ Cp. Budraß, *Flugzeugindustrie und Luftrüstung in Deutschland 1918-1945* (Fn. 6), 58 ff.

⁵⁰ Letter Brandenstein-Zeppelin to Max von Gemmingen (28.9.1920) StA Fr 3/Nr. 364; Cp. the letters in Italiaander, *Ein Deutscher namens Eckener* (Fn. 35), 135-139.

⁵¹ *Ibid.*, 201.

⁵² Monthly report of the dockyard October 1924. LZA 05/630.

⁵³ Karl Clausberg, *Zeppelin. Die Geschichte eines unwahrscheinlichen Erfolges*, München 1979, 13 ff.



LZ 126 over Manhattan

The occasion to construct the LZ 126 resulted from the American demand to receive a substitute for two destroyed airships, which were entitled to them from the treaty of Versailles. In June 1919, the Germans countersank parts of their fleet at Scapa Flow, before these ships could be delivered to the Entente.⁵⁴ The airship-people did not want to rank behind and destroyed two Zeppelin destined for the States. Eckener now offered the USA and the German Foreign ministry to produce a new airship, financed by the Reich.⁵⁵ To the objection, this airship could get lost over the atlantic, Eckener agreed to mortgage the whole company's property, so in case of a crash the Zeppelin-concern would devolve to the German state. The shareholder finally accepted Eckener's plan, who emphatically referred to §3 of the foundation's articles and evoked the heritage of Count Zeppelin. Colman strictly rejected this deal and perceived the board of director's placet as a grave personal defeat.⁵⁶

Eckener did not dissemble the great risk of the transfer of the LZ 126 and called the deal «a little venturous undertaking».⁵⁷ He wrote: «I put all eggs in one's basket. If the undertaking with the reperation-airship has failed, we would have lost everything, not only the airship, but also the trust in an air-transport with airships. The Friedrichshafen plants would have been destroyed. All over – closing time – for ever!».⁵⁸ This quote deserves closer attention: Not the

⁵⁴ Andreas Krause, *Scapa Flow. Die Selbstversenkung der wilhelminischen Flotte*, Berlin 1999, 293 ff.

⁵⁵ Wolfgang Meighörner/Desdemona Vagedes/Klaus Jürgen Wrade, *Das Jahrhundert der Zeppeline*, Darmstadt 2000, 94 f.

⁵⁶ Herzfeldt, *Geschäft und Aufgabe* (Fn. 21), 109 f.

⁵⁷ Quoted in: Italiaander, *Ein Deutscher namens Eckener* (Fn. 35), 202.

⁵⁸ Ebd., 217.

company or the general management had risked everything, but he, Eckener, alone.⁵⁹ He glorified the the construction of the LZ 126 to a heroic act of a great individual. This risk was merely justified, if, as Eckener wrote, otherwise the company's fate was sealed.⁶⁰ It is not clear, if he meant, that with the abandonment of the construction of airships the company would have lost the meaning of its existence, or if he meant its economical survival.⁶¹ Whilst the first statement is a value-judgement, the second is hard to clarify due to the absence of business records. An assessment of the economical situation of the concern is difficult, especially because of the inflation.⁶²

A fundamental estimation nevertheless seems to be possible. Undoubtedly, the company had grave problems in the early 1920s. The most subsidiaries had to establish on new, to some extent extreme volatile markets. But it was not the case that they made constant losses. Just yet, the ZF had been restructured successfully. Not at least: the manufacturing of the LZ 126 did not solve the firm's structural problems. By the construction of the *Reparationsluftschiff* the dockyard was busy for a year, but the enterprise did hardly achieve any profits with it, particularly because the money was devalued by the inflation.⁶³ The situation of a subsidiary like the *Maybach-Motorenbau* was eased, but it could not save its survival from the construction of a dozen engines for an airship too. In face of the fact, that the construction of airships would never be profitable (because of the high operating costs it was even impossible to generate earnings with an existing Zeppelin!) and the company therefore depended on public subsidisation, the airship could by no means represent its major business area. It is for this reason untrue, that the construction of LZ 126 saved the enterprise's survival. Moreover, the company still possessed enough substantial assets to live on in hard times.⁶⁴ In a difficult situation, the *Reparationsluftschiff* brought just a gain in breathing time.

Therefore, the conflict between Eckener and Colsman was not only a struggle between two people very much aware of their power. In fact, it was significant for the question of the future strategy of the company: Eckener wanted to produce Zeppelins, everything else was unimportant. Last but not least, Eckener acted for the shareholder's interests, and they demanded to lead the company back to the airship. This was the condition for Eckener's rise in the concern's hierarchy. But because this project admittedly had no chance to be profitable in the near future, he needed public aid. Elmar Kuhn wrote correctly, that Eckener converted

⁵⁹ Kurt Tucholsky wrote in 1926, Eckener would be a «loudly modest» man. Theobald Tiger (Pseud. Kurt Tucholsky), *Zeppelin-Spende (Herrn Eckener dargewidmet)*, in: *Weltbühne* 22 (1926), 51.

⁶⁰ Eckener, *Im Zeppelin über Länder und Meere* (Fn. 37), 42.

⁶¹ He wrote, that the LZ's possibilities without the airship would be «not worth mentioning». Ibid.

⁶² Cp. Brutto balance sheets 1922 for 10 subsidiaries of the *Luftschiffbau Zeppelin*. LZA 05/0269.

⁶³ The subsidiaries also benefited from the inflation, because it lowered the developing costs.

⁶⁴ Knäusel, *Unternehmen Zeppelin* (Fn. 17), 82, 86 f.

Zeppelin into a «political company», which depended on subsidies as long as it produced airships.⁶⁵ Alfred Colsman's main goal was to save the company's survivability, even if this meant to abstain from the Zeppelin. Since the USA-journey, Eckener stood up with his strategy against Colsman, particularly because he marketed the Reparationsluftschiff's journey in a very skillful manner.⁶⁶ But the workforce, too, was committed to the project: the production of an airship was something substantially different compared to industrial castings. The patriotic enthusiasm after the LZ 126's success finally gave the rest.

In 1923, the restructuring of the concern took place, which Eckener had planned already in 1920. The foundation, so far merely the major shareholder of the Luftschiffbau, got a blocking majority for the subsidiaries. This step was justified with the consumption of the foundation's capital by the inflation. As a matter of fact, the foundation had massive financial problems during the inflation.⁶⁷ In early 1923 for instance, the ZF transferred three million M. to it.⁶⁸ Anyway, this surely was not the real reason, especially because the restructuring did not solve the foundation's financial difficulties. During the 1920s, no board meeting took place for years, because the lack of capital disabled the foundation to fulfill its purpose.

Essentially, the restructuring codified the shift of power inside the enterprise. Eckener now was its unchallenged master. He could dictate the overall strategy, but he did not need to interfere in the operating business. He had put through an institutional structure, which perfectly fitted to his way of management. The foundation's financial crisis and the inflation apparently provided a perfect opportunity to execute the restructuring smoothly. For the assignment of the blocking minority the Luftschiffbau was paid by the proceeds of a sale of engineering drawings to Japan⁶⁹, even if it seems to be obvious, that this deal was merely a fictitious transaction. It was possible now to control Colsman. Activities of diversification could be blocked by referring on § 3 of the foundation's articles. Furthermore, it became easier now for the foundation, to take money from the subsidiaries and to reallocate it.⁷⁰ By this restructuring, the power-struggle between Eckener and Colsman was finally finished.⁷¹

⁶⁵ Kuhn, *Friedrichshafen in der Weimarer Republik* (Fn. 8), 37 f.

⁶⁶ Z.B. Hugo Eckener, *Die Amerikafahrt des „Graf Zeppelin“*, ed. by Rolf Brandt, Berlin 1928.

⁶⁷ Cp. Papiermarkbilanz 31.12.1923. LZA 05/0271, S. 38 f.

⁶⁸ Letter Zeppelin-foundation to the chairman of the ZF's board of directors (24.4.1923). StA Fr 3/Nr. 347.

⁶⁹ Striedacher, *Anpassungsprozesse* (Fn. 1), 167 ff.

⁷⁰ Letter Bassus to the members of the shareholders of the Zeppelin-foundation (1.9.1920). StA Fr 3/Nr. 364.

⁷¹ Cp. Transcript meeting of the board of directors of the Zeppelin-foundation 13.2.1929, StA Fr 3/Nr. 364.

4. Successful diversification? The subsidiaries of the Luftschiffbau Zeppelin

The problem of diversification remained prevailing after the stabilisation of the currency in 1923/24, mainly because the construction of airships could be nothing more than an additional business. Since yet, the subsidiaries had not established on their new business segments successfully. Some succeeded, for others the difficult times had just begun.

After its financial restructuring, the ZF came along well. During the inflation, most of the small car-manufacturers had to give up their business (which had bought most of the gears because they could not afford a own fabrication of gears). But this smaller outlet was compensated by that the surviving firms begun to follow the conception of «fordism» and payed more attention on typing and rationalisation. The ZF could benefit from this development and the 1925 introduced uni-gear became a big economical success. It enabled the start of a serial-production, which brought about an important financial support for the construction of special gears. In addition, since 1923 Alfred von Soden was supported by the financial director Hans Cappus. With him, a better financial discipline found its way into the firm and with a huge amount of work and commitment he pushed the acquisition of new outlets.⁷² Hence, the ZF begun to fulfill the expectations.

For no subsidiary Colsman had higher hopes than for the Maybach-Motorenbau, but it remained the «problem child» within the company. Constantly, a bettering of the situation seemed to be on the horizon, but this was constantly short-lived too. Until 1933, Maybach achieved in no more than three accounting years a postive result. Between 1924 and 1927, the firm's losses summed up to 4 million RM.⁷³ In 1925, it was forced to borrow 2 million RM to maintain its activities.⁷⁴ In 1927, the Luftschiffbau lend Maybach 1,2 million RM to enable the firm to fulfill its payment obligations. Additionally, another credit in the amount of 1,5 million RM was necessary.⁷⁵ So the Maybach Motorenbau put pressure on the otherwise satisfactory company earnings.⁷⁶ But for several reasons Maybach was neither sold nor shut down.

⁷² Herzfeldt, *Geschäft und Aufgabe* (Fn. 21), 113 ff.

⁷³ Treue/Zima, *Hochleistungsmotoren* (Fn. 14), 121. Business report Maybach Motorenbau GmbH 1927. LZA 05/0246.

⁷⁴ Monthly report December 1925 (LZ). LZA 06/0688.

⁷⁵ Business report of the Konzernabteilung der Luftschiffbau Zeppelin, Friedrichshafen 1927. LZA 05/0245.

⁷⁶ Luftschiffbau Zeppelin GmbH, Friedrichshafen. Report and bilance sheet 1928. LZA 05/0253.

Maybach-Motorenbau 1924-1929:⁷⁷

Year	Total Sales	Profits/Losses	Employees
1924	3.171.000	- 109.000	927
1925	3.730.000	- 1.125.000	921
1926	3.893.000	- 1.396.000	896
1927	4.571.000	- 1.398.000	755
1928	4.807.000	+ 641.000	703
1929	4.460.000	+ 15.000	-

Maybach had manifold problems. One difficulty was the stagnating production of luxury-cars. At that time, automobiles had an exponential development potential, so the constructions had constantly be advanced and therefore fastly became obsolete. Especially for Maybach this was an essential problem: the customers could not feel happy when their expensive car was old-fashioned right after they had bought it. The construction of cars was in the second half of the 1920s indeed less important than the production of engines for busses, boats, and traction units.⁷⁸ But the technical standards of engine construction caused problems too, because it led to high development-costs and difficulties to install serial-production. In 1925 a survey reported, the firm would be still in a process of change.⁷⁹ Additionally, Maybach was affected by grave organisational problems. Nobody denied that the technical level of Maybach engines was extremely high, but in the organisation of production and sales exitted grave deficits.⁸⁰ Not at least this was related to the brilliant engineer Karl Maybach's inability, to accept any technical compromise for profitability reasons.⁸¹

Maybach's difficulties further weakened Colsman's position inside the company. Eckener wrote in 1926 to Graf Brandenstein-Zeppelin: « I still do not know, how we will decide in the shareholder's meeting concerning new capital needs of the Maybach-Motorenbau. But it seemed necessary to me to exert the highest pressure on the LZ (on Mister Maybach and Mister Colsman). In the next few days we surely will have several meetings to advise possible measures. Needless to say, that they still use the 6- or 8-year point: >The goal is hard at hand<.»⁸² Quotes like this visualise the fronts inside the company. It had to offend Colsman, that Eckener refered on the need for profitabilty (normally his profession). At the same time, Colsman did not want to suspense the diversification-strategy and did nearly everything to sustain Maybach. But he obviously failed to control Karl Maybach's activities, even if the

⁷⁷ Kuhn, *Friedrichshafen in der Weimarer Republik* (Fn. 8), Tabellenanhang, 7, 14.

⁷⁸ Letter Alfred Colsman to Hubert Inden (28.10.1927). LZA 06/0112.

⁷⁹ Striedacher, *Anpassungsprozesse* (Fn. 1), 186.

⁸⁰ Bericht des Ingenieurs Ernst Roth über seinen Besuch bei der Maybach Motorenbau GmbH in Friedrichshafen vom 4.-6.7.1927. LZA 06/0113.

⁸¹ Treue/Zima, *Hochleistungsmotoren* (Fn. 14), 115.

⁸² Letter Hugo Eckener to Count Brandenstein-Zeppelin (23.12.1926). StA Fr 3/Nr. 351.

latter was, by his rank as engineer and shareholder of the Motorenbau, in a much stronger position than, for instance, the management of the ZF. The first measures to reorganise the firm took place not until 1926.⁸³ Then the staff was reduced and the sales-organisation tightened. In 1928, the firm achieved a profit of 640.000 RM, before the Great Depression created a dramatic situation for Maybach again.⁸⁴

In the light of the basic data it seems to be astonishing, that the Zeppelin-concern did not sell or shut down the Maybach-Motorenbau. Apparently, for all parties inside the company this subsidiary was indispensable. One reason was properly the same as in the ZF-case: Zeppelin had still invested so much money, that a shut-down would have been more expensive than further subsidising. Another reason can be found in personal motives: for Colsman a termination of Maybach would have meant to admit the failure of his diversification-strategy. Apart from that, he was still convinced of the engines technical quality.⁸⁵ Eckener on the other hand could hardly risk to loose the producer of airship-motors, which had an unique know-how in this segment. The Maybach-Motorenbau finally survived the 1920s, because for several reasons it was indispensable.

The business-development of the Dornier-Metallbauten at last was principally positive during the 1920s. In 1927, the number of orders rapidly increased, so that in this year the number of employees doubled to over 1000.⁸⁶ But the production of airplanes was still so complex and the development-costs so high, that the firm achieved only a little or no profit at all.⁸⁷ Another problem of the Dornier-Metallbauten was, that in the plant in Marina di Pisa the influence of the fascist government grew bigger and bigger. It constantly threatened to get out of Dornier's and the company's control. The way out was to build up a new plant in a foreign country, wherefore the swiss village Altenrhein was chosen. In 1927, the production of airplanes started.⁸⁸ The production in Italy however remained, even if it was considered to sell the plant in Marina di Pisa⁸⁹ (what did not happen until 1931).⁹⁰ Airplanes were likewise produced in Manzell, today a district of Friedrichshafen.⁹¹

The Dornier Metallbauten, like the German airplane-production as a whole, still depended on public subsidies. Dornier reported in his autobiography, that he sometimes met his senior

⁸³ Letter Alfred Colsman to Generaldirektor Von der Porten (8.6.1927). LZA 06/0113. Business report Maybach Motorenbau GmbH 1927. LZA 05/0246.

⁸⁴ Treue/Zima, *Hochleistungsmotoren* (Fn. 14), 121 ff.

⁸⁵ Letter Alfred Colsman to Karl Trutz (8.4.1927). LZA 06/0113.

⁸⁶ Letter Alfred Colsman to Alfred Krupp v. Bohlen-Halbach (2.5.1927). LZA 06/0112.

⁸⁷ Report and balance sheets of the subsidiaries 1928. LZA 0005/0248.

⁸⁸ Henry Wydler, *Dornier und die Schweiz. Eine technologische Beziehung über den Bodensee*, in: Meighörner, *Zeppelins Flieger* (Fn. 25), 187-201, 191 f.

⁸⁹ Letter Alfred Colsman to Leisler Kiep (25.5.1927). LZA 06/0112.

⁹⁰ Brigitte Kazenwadel-Drews, *Claude Dornier. Pionier der Luftfahrt*, Bielefeld 2007, 58.

⁹¹ LZ GmbH, Monthly report May 1923. LZA 05/0200.

Eckener in the ministry of transport's anteroom. Both applied to raise money for their individual projects.⁹² To some degree this shows Dornier's stubbornness, which hindered a good relation between the Metallbauten and the corporate headquarters.⁹³ It was hard for Dornier to accept, that his firm was nothing more than a subsidiary of a bigger concern, which requirements he had to subordinate. Decades later he perceived the licence contract from 1926, which committed Dornier to provide his inventions to the company for a fixed salary⁹⁴, as an infamy (although he knew, that this contract had served him well). But because of the financial situation of the Metallbauten he had in fact no alternative.⁹⁵

That the organisational structure of the company had lost its sense after the abolition of the constant production of Zeppelins hindered the improvement of the whole company's situation. There were barely any synergy effects, and a significant lack of solidarity between the subsidiaries came along.⁹⁶ It did not exist a reasonable accounting for the whole company, what makes an assessment of its economical situation a difficult task. In the second half of the 1920s it was attempted to tighten the concern's organisation. The subsidiaries in Berlin were closed (with two exceptions: Zewas and a small casting house). But even if the ZF slowly began to establish as a gears-producer: the whole company could not flourish as long as the Maybach-Motorenbau (as the most important component of the diversification-strategy) remained in the red. On the other side, Zeppelin still possessed substance, material assets and capital reserves it could feed on.

⁹² Dornier, *Aus meiner Ingenieurslaufbahn* (Fn. 30), 198 f.

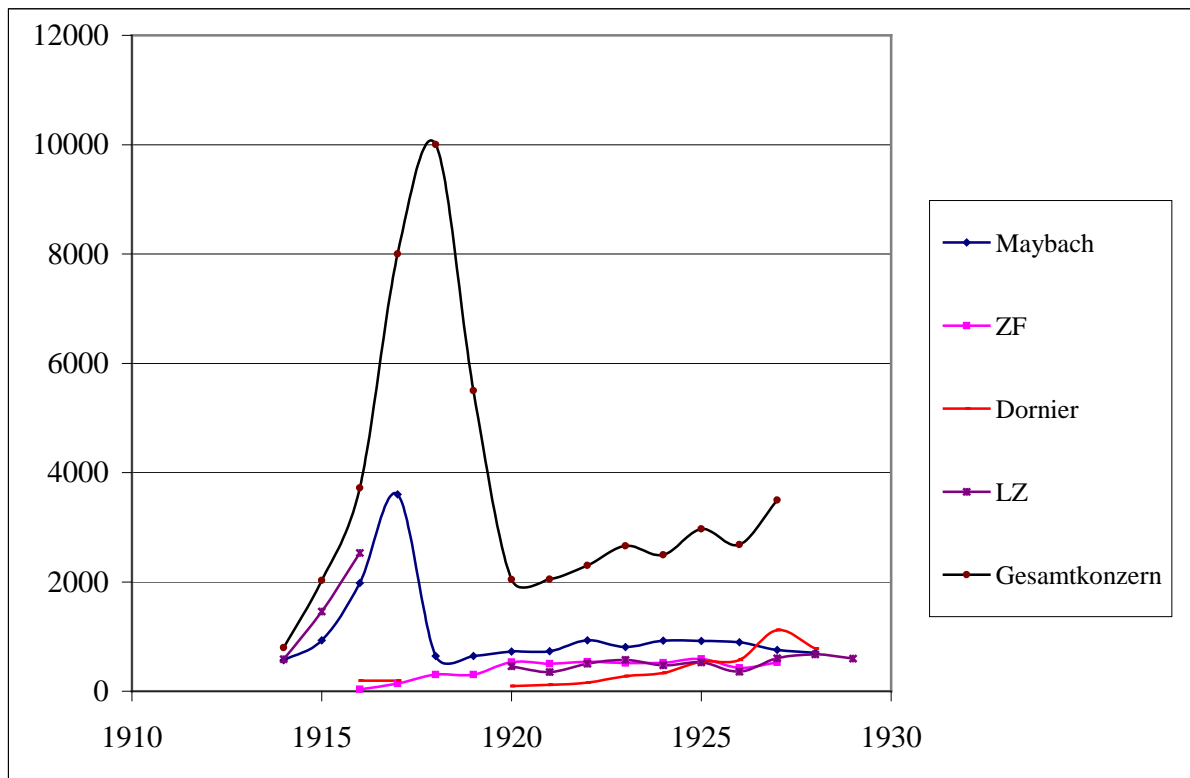
⁹³ Letter Alfred Colsman to Leisler Kiep (4.7.1927). LZA 06/0113.

⁹⁴ Licence contract between Dornier-Metallbauten GmbH/Friedrichshafen and Mister Claude Dornier, Friedrichshafen (21.6.1926). LZA 0005/0021.

⁹⁵ Dornier, *Aus meiner Ingenieurslaufbahn* (Fn. 30), 158ff.

⁹⁶ Letter Karl Arnstein (Goodyear-Zeppelin Corporation) to Alfred Colsman (13.8.1927). Kuhn, *Friedrichshafen in der Weimarer Republik* (Fn. 8), 38.

Employees Zeppelin 1914-1929:⁹⁷



Furthermore, the company constantly had to fight with the typical problems of an «inventors enterprise». The most important subsidiaries were presided by constructing engineers, who, in case of doubt, preferred the best technical solution to the most profitable. Coltsman later on expressed his notion concerning a company's organisation in the following way: «The organisations, which give the talents plenty of opportunity for their development, are normally more valuable than the talents, who suffer from their stoppages and are not able to build up solid organisations by themselves. Naturally, there are exceptions too, but the construction of ships, railways, and cars were never for a long time successfully drawn on constructing engineers.»⁹⁸ Indeed, Coltsman failed to put this maxim into practice. Solely in case of the ZF, the professionalisation of organisational structures took place early. In Maybach's case, such a professionalisation could not put through before the conditions became extremely dangerous. Dornier refused to let anyone from outside influence his technical and economical affairs. This could be a reason (among long existing tensions between the Luftschiffbau and the airplane construction⁹⁹) why Dornier could buy the firm

⁹⁷ Ibid., Tabellenanhang, 7. Striedacher, *Anpassungsprozesse* (Fn. 1), Tabellenanhang.

⁹⁸ Coltsman, *Luftschiff voraus!* (Fn. 3), 184.

⁹⁹ Cp. Letter Kurt Lehmann to Alfred Coltsman (7.5.1927). LZA 06/0112.

with his name in 1932 from Zeppelin. Later years nevertheless showed, that this was an economical mistake.¹⁰⁰

5. Zeppelin as a «political company»: The Luftschiffbau in the second half of the 1920s

Besides to the efforts of the company's consolidation, the construction of airships ranked high on the agenda too. But despite of the LZ 126's success, a lack of capital remained. The German state had given the money for the Reparationsluftschiff, but thereafter the enterprise was still unable to finance an airship on its own. In this situation, Eckener had the idea to seeze the atlantic flight's public effect to repeat the success of the fund raising campaign in 1908 and to collect the capital for a new Zeppelin. In 1925, he launched (in spite of the foreign ministry's deep scepticism) the «Zeppelin-Eckener-Spende». But even if the company could rely on public attainment and patriotic sympathy: the bounties did not flow as richly as in 1908. This could not be astonishing in the face of the devaluation of savings during the inflation and the last years economical turbulences. In addition, the fund raising campaign started in the late-autumn of 1925, which were shaped by the «Winterkrise» (winter crisis) 1925/26 and a rising rate of unemployment. Some people also criticised the high costs of the fund raising's organisation and supposed abundant fees for the collectors.¹⁰¹ Despite of the big effort (Eckener gave almost 100 speeches!¹⁰²) the Zeppelin-Eckener-Spende generated only a little more than two million RM, instead of the expected six millions.¹⁰³ The German state had to add two million RM to enable the company to construct and operate the new airship «Count Zeppelin» (LZ 127).¹⁰⁴ The difficulties of financing and development were demonstrated by the fact, that the ship was not finished until June 1928.¹⁰⁵

To save the essential attainment, Eckener had to put the Zeppelin into the lime-light and keep the public in suspense by ever new pioneering achievements.¹⁰⁶ In the end of 1928, the

¹⁰⁰ Italiaander, *Ein Deutscher namens Eckener* (Fn. 35), 272.

¹⁰¹ Cp. Zeitungsausschnittssammlung in LZA 09/0646.

¹⁰² Meighörner, *Das Jahrhundert der Zeppeline* (Fn. 57), 108.

¹⁰³ Revisionsbericht der Zeppelin-Treuhandgesellschaft über die Zeppelin-Stiftung 1927, 24 ff. LZA 06/0730.

¹⁰⁴ De Syon writes, the Reich payed one million RM and 3,5 million. RM were payed by the subsidiaries. This is properly incorrect. The LZ 127 costed about 3,5-4 million RM. Two millions derived from the Zeppelin-Eckener-Spende. 1,1 million RM derived from the Reich, which also payed 1 million RM for the LZ 127's operation. The rest maybe derived from the subsidiaries. Cp. De Syon, *Zeppelin!* (Fn. 38), 128. Letter Zeppelin-foundation to the LZ GmbH (22.10.1929) StA Fr 3/Nr. 355.

¹⁰⁵ Business report 1928 Luftschiffbau Zeppelin GmbH. LZA 05/0253. Monthly report Verkehrsabteilung (Dec. 1927) LZA 06/0673.

¹⁰⁶ De Syon, *Zeppelin!* (Fn. 38), 147.

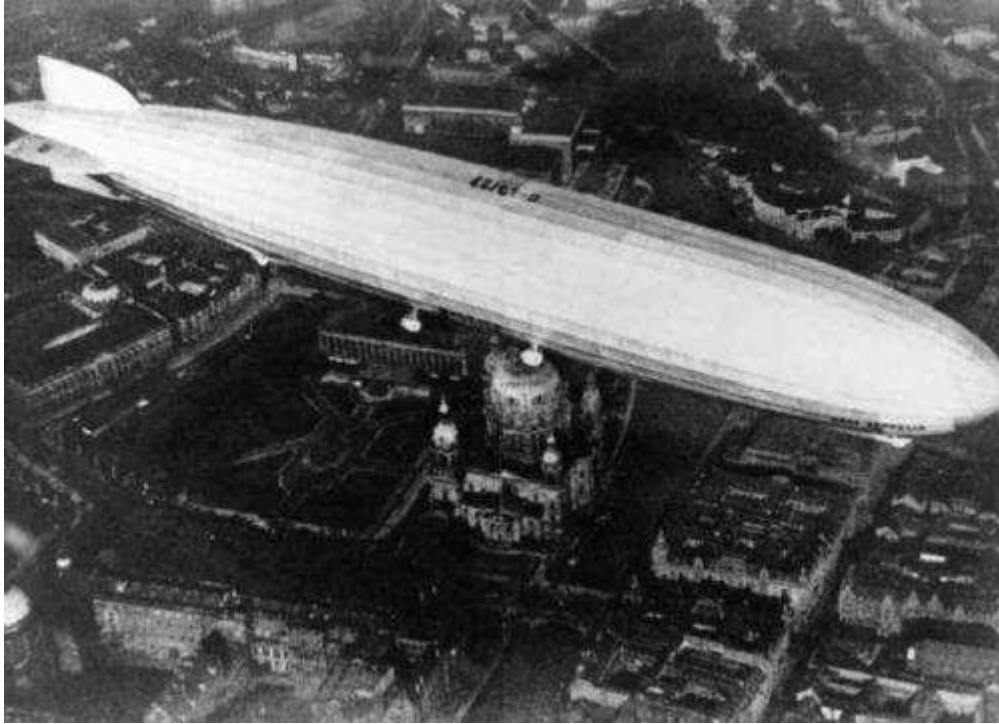
atlantic-crossing was repeated.¹⁰⁷ Afterwards the project of a journey around the world made the headlines,¹⁰⁸ which took place in late-summer 1929. The Zeppelin flew from Friedrichshafen in an eastward direction, made stopovers in Tokio, Los Angeles, and Lakehurst, and arrived in Friedrichshafen again after 35 days. In 1931, a travel to the Northpole followed. This extensive travelling (on important journeys Eckener drove the Zeppelin himself) shows the little bit strange fact, that Eckener most of the time was not attendant in Friedrichshafen, even though he headed the whole company. Maybe this can explain why Colsman remained in his position as general manager of the Luftschiffbau, despite the conflicts between him and Eckener. He had a better overview over the complicated structure of the company, because he had created it. His «arcane knowlegde» was hard to replace. It was also a part of his «habitus» to deal with the company's difficult tasks: Yet before 1918, he sat out the hard wage-negotiations with the workers, while Count Zeppelin stood aside. In the end, the latter could intervene in his conciliatory manner, whilst Colsman had to feel the worker's wrath. Eckener surely had many qualities, but he was no man for the day-to-day business. He defined the company's strategy and controlled Colsman and the management. The operational business, however, remained in Colsman's hand.

Surprisingly, the relation between Eckener and Colsman appeared to improve. In 1927, the latter wrote to Karl Arnstein from the Goodyear-Zeppelin Corporation: «the circumstances we are normally not talking about»¹⁰⁹ would have relaxed. And in fact: as long as Eckener did not mortgage the whole company and the concern was subsidized by the state and the public, there was no reason why the construction of airships and the other activities of the company should not harmonize. In the meantime, Colsman appeared to be an enthusiastic advocate of the airship-project again, even it is hard to judge, to what extent his adoption of Eckener's semantics expressed his own opinion or merely served the company's public appearance. But Eckener, too, learned from the failure of the fund raising campaign and public accusations: in 1928 he decided, that the firm should not raise or accept any public bounties until the technical and economical feasibility of an air-transport with airships was undoubtedly proved.

¹⁰⁷ Letter Alfred Colsman to Regierungsrat Biser (20.11.1928). LZA 06/0120.

¹⁰⁸ Letter Oberpräsident of the state Brandenburg/Berlin to the superintendent of Berlin (27.9.1929). Landesarchiv Berlin. A Pr.Br.Rep. 030, Nr. 14464.

¹⁰⁹ Letter Alfred Colsman to Karl Arnstein (18.4.1927). LZA 06/0117.



LZ 127 over Berlin (1929)

The profitability of a commercial air-transport remained the decisive problem. In a speech hold in 1929, Colsman did not negate that profitability was principally possible, but the scenario he created must appear to his audience as utopical.¹¹⁰ Another unsolved question was, who the competitors of the airship were: airplane or ship? Eckener justified the airship's viability (or even its superiority) with the better performance on long distances and better comfort. However, to cross the atlantic in the LZ 127 required 110 hours, while an ocean liner like the «Mauretania» required 124 – and, because of the smoking ban and the narrow space, the Zeppelin could not compete with the ship's comfort.¹¹¹ Some passengers bemoaned numerous «dizzy dives» which was not beneficial to the airship's public perception.¹¹² Therefore, the project of an air-transport with airships was from two sided on the back foot: from the technical more advanced airplanes, and the more luxerious and not essentially slower ships. Even if it was not inevitably foreseeable that the airship did not stand a chance against the airplane, the competitive environment of the Zeppelin was even in the 1920s far from comfortable.

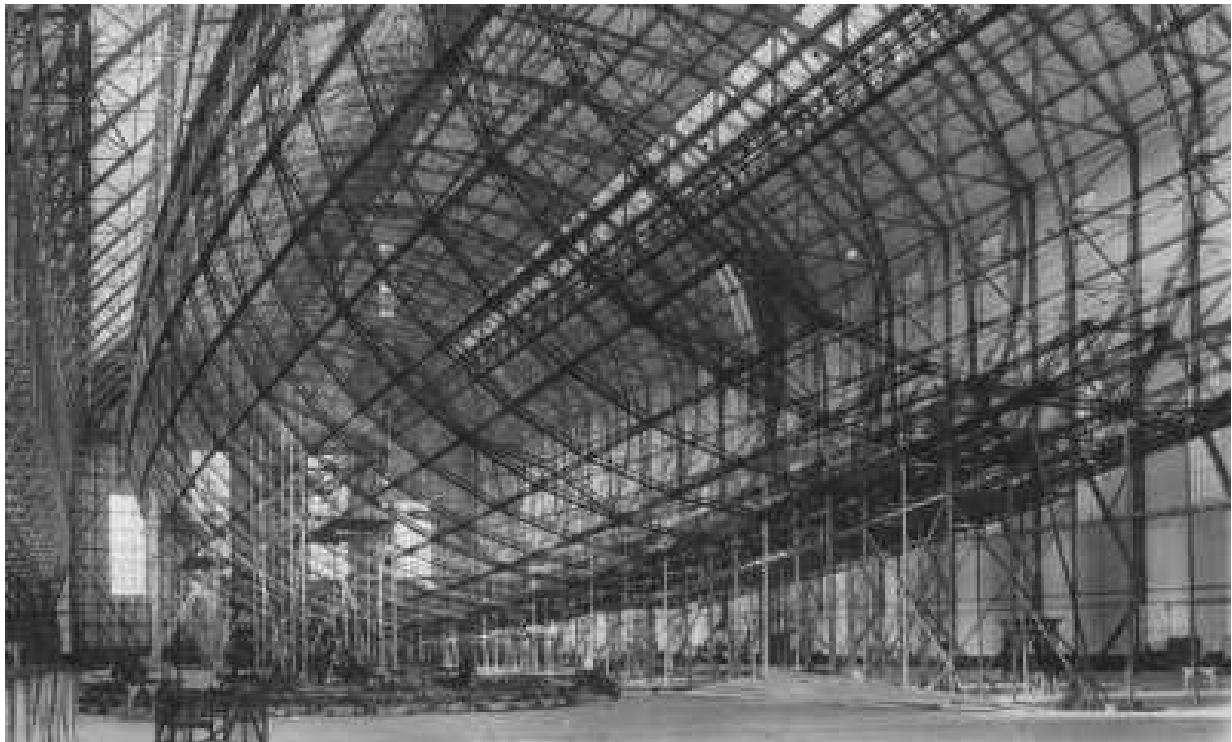
The airship LZ 127 was merely intended as a type of aircraft and caused, despite of its success, some problems. Eckeners conclusion was that the next airship had to become bigger,

¹¹⁰ Alfred Colsman, *Probleme der Wirtschaftlichkeit des Luftverkehrs*, Friedrichshafen 1929, 17: Colsman summed up the starting capital for a profitable air-transport (six airships and nine halls) to 70 million RM.

¹¹¹ De Syon, *Zeppelin!* (Fn. 38), 113 f.

¹¹² Art.: Says Ship is Heaven compared to Zeppelin. Appendix letter Hubert Inden to Alfred Colsman (13.11.1928) LZA 06/0121. Ernst W. Steinitz, *Die Zeppelin-Motoren*, in: *Die Weltbühne* 25 (1929), 929 f.

faster, and saver. But therefore the Friedrichshafen construction halls did not suffice. A new building, indeed, demanded huge investments. In 1928, Eckener numbered the financial requirements of the coming tasks up to 11 million RM: five millions for the new airship and six millions for two construction- and operating-halls in Friedrichshafen.¹¹³ In his opinion, this was the only way to achieve a profitable air-transport. But right after the company had placed an order for the first hall with the Gutehoffnungshütte AG (Oberhausen), the public subsidies for aviation were radically shortened.¹¹⁴ Eckener had to undertake great efforts to assure the company's public grants.¹¹⁵ The second hall, with a length of 260 meters to this date the biggest in the world, could be build in 1931 too, even if the financing was not completely provided.¹¹⁶



LZ 129 under construction

In the summer of 1929, Alfred Colsman left the company.¹¹⁷ Even it is impossible to clarify the background of this decision completely, it might have been several incidents like that

¹¹³ Hugo Eckener, *Kurze Darstellung der bisherigen Arbeiten und der weiteren Aufgaben der Luftschiffbau Zeppelin*, in: Rolf Italiaander (Hrsg.), Hugo Eckener. Die Weltschau eines Luftschiffers, Husum 1980, 72-74.

¹¹⁴ Article Sterkrader Zeitung (12.4.1929). RWWA Nr. 404121/31.

¹¹⁵ Letter Krüger to GHH Oberhausen (12.4.1929). RWWA Nr. 404121/31.

¹¹⁶ It is interesting to compare the subsidies for the Zeppelin-company with the overall-sum of subsidies payed for German aviation. The latter summed up to 17 million RM in 1928 and in the following years to 12 million RM. So obviously, Zeppelin got a big piece of the action, which demonstrates Eckeners „standing“ in the Ministry of transport. Budraß, *Flugzeugindustrie und Luftrüstung in Deutschland 1918-1945* (Fn. 6), 166.

¹¹⁷ Cp. Schreiben Hugo Eckener an Alfred Colsman (10.7.1929). Sta Fr 3/Nr. 346.

after the death of Count Bassus Eckener and not his deputy Colsman became chairman of the ZF's board of directors.¹¹⁸ Some newspapers also speculated that Colsman perceived the financial risk of the two new halls as too big.¹¹⁹ His last important transaction was the sale of the airport-areal Staaken/Dallgow to the City of Berlin in spring 1929. This deal implied an important financial relief for the company. After fierce negotiations the price was fixed to 8,5 million RM. Two millions were transferred directly from the City of Berlin to the Reichskreditanstalt, to pay back a loan from the Maybach-Motorenwerke. The rest of the money should be paid to the Zeppelin-concern in installments of 500.000 RM half a year.¹²⁰

Zeppelin was, in summary, an extreme ambivalent company during the 1920s: On the one side, the enterprise Zeppelin became more and more independent from the airship. On the other side, the Luftschiffbau survived, but still relied on bounties and subsidies. Whilst until the end of WW I the organisation of the company was focused on the manufacturing of airships, the Zeppelin concern in the 1920s was finally nothing more than a group of firms which produced together an airship from time to time. This ambivalence was embodied in Colsman and Eckener, the «clerk» and the «adventurer», who also represented different types of entrepreneurs. The atlantic-journey of the LZ 126 was not at least such a PR-success because Eckener played «all or nothing». He took a considerable (from Colsmans point of view: intolerable) risk – and won. Since that time, Eckener was the hero and darling of the German public. He embodied to a certain extent the heroic personality par excellence, which functioned as a counter-image to a bemoaned dominance of the masses.¹²¹ Not at least, it was also the counter-image to a type of entrepreneur who did not dare to take any risks and tried to guard against all inconveniences of the market. But this was, indeed, also the way Eckener wanted to be perceived: a heroic loner, who later on more and more stopped to engage in the day-to-day business of his firm. Somekind of an «anti-bureaucratic» character¹²², who had, beside his daringness and charisma, also much fortune in his life. The «legend» Eckener would hardly exist, if the LZ 126 would have crashed over the atlantic and dragged the concern under.

¹¹⁸ Herzfeldt, *Geschäft und Aufgabe* (Fn. 21), S.130; Italiaander, *Ein Deutscher namens Eckener* (Fn. 35), 191.

¹¹⁹ Stuttgarter Neues Tageblatt (13.6.1929). RWWA Nr. 404121/31.

¹²⁰ Offer Zeppelin GmbH to the City of Berlin, negotiated Berlin 13.3.1929. LA Berlin. A Rep. 038-08, Nr. 6020.

¹²¹ Cp. Thomas Mergel, *Führer, Volksgemeinschaft und Maschine. Politische Erwartungsstrukturen in der Weimarer Republik und dem Nationalsozialismus*, in: Wolfgang Hardtwig (Hrsg.), *Politische Kulturgeschichte der Zwischenkriegszeit*, Göttingen 2005, 91-127.

¹²² Cp. Italiaander, *Ein Deutscher namens Eckener* (Fn. 35), 226 f.

Colsman and Eckener tried both – in their own individual way – to save the heritage of Count Zeppelin. Colsman wanted to ensure the economical survivability of the firm; Eckener's main goal was to continue the airship production inside the company. Temporarily, a cooperative coexistence of this two philosophy's seemed to be possible. But also after Colsmans leave it was clear, that the diversification of the company was unstoppable, as long as a profitable air-transport with airships was a distant prospect - and should remain it.