



EFRC
European Forum for
Reciprocating
Compressors e. V.

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Board:
Dr. R. Peters
Dr. G. Machu
Mr. M. Tanner

Minutes of the General Assembly April 24th, 2020

held as a webinar
9:30 – 11:30 AM

1. Welcome and Annual Report by Dr. R. Peters, Chairman EFRC

The Chairman welcomed all participants.

The current membership count for 2020 is 42 members:
10 operators, 11 OEM's, 9 component suppliers, 4 universities and institutes, 5 consulting companies, 2 engineering contractors, 1 press.

New members in 2019: Wentzel Dynamics joint the EFRC again.

Members, who left the EFRC in 2019: SafeGas, Andreas Hofer (was taken over by NEA) and Southwest Research Institute.

About our association, the EFRC e.V.", the chairman states that "the whole setup is rather unique". In 2019 the EFRC celebrated its 20th anniversary. In August 2019 the former board members of EFRC met in Vienna. Unfortunately Prof. Gotthard Will and Siegmund Cierniak could not attend.

Rene Peters remembered the death of Siegmund Cierniak, who passed away on 21st of November 2019. We will keep him, the 2nd chairman of EFRC, in good memory.

Main results of EFRC activities in 2019/2020:

- The EFRC Training in Delft 2019 was successful
- The R&D Working Group and their Focus Groups are very active
- The Standardisation Working Group started with 8 members in 2020
→ New members, esp. operators, are very welcome, please consider joining.
- The new website ready to be released
- A lot of preparatory work for the EFRC Conference, the EFRC Training and the Student WS is ongoing
- EFRC closed a new trade agreement with Compressor Tech 2: Exchange of membership fee for advertisement.

Rene Peters spoke about the impact of Covid 19 for the EFRC:

- Change of physical meetings to online meetings
- Postponement of the Student WS to 2022
- Postponment of the Conference to 2021
- Postponment of the Training
- Consider more webinars for WG Communication

The chairman presented important decisions that will have to be made at this assembly.

For more details and information please refer to the presentation on the share point site:
<https://ckdt.sharepoint.com/sites/EFRCGeneralAssembly2020Globally/>

2. Financial Report by Mr. M. Tanner, Cashier EFRC

Matthias Tanner explains the achievements of last year. He used the in 2019 introduced **new way** to present the number for better clarity. He split the financial overview into the three sections:

- General Part of EFRC (non taxable)
- Conference/Workshop/Training (taxable)
- R&D (taxable)

Mr. Tanner presented the balance sheet and the income statement for 2019 as well as the planning for 2020 and the open member fees.

Overall Profit/Loss: in 2019 the EFRC has got an overall loss of €-68'219,07. As we are negative we don't have to pay tax.

- General Part of EFRC:
 - We spent more money than we earned. A big position (~ 26 k€) is the financing of the Standardisation work
 - On the long run we can't spend more money than we earn
 - Consequences: save money for dinner/shows at our own conferences, collaboration with VDMA, save costs from deletion of web shop
- Precompetitive Research:
 - The negative result is more fictive as it includes WIP and open receivalbes
 - The income from last year was put on the bank account
 - R&D is healthy
 - Carefully planning of 2020 will avoid negative result
- EFRC Conference/Training/Workshop:
 - The financial result of this section was 2019 slightly negative
 - For this year we consider a webinar training. This could bring in some money

- The Student Workshop had to be cancelled as of COVID-19

Mr. Tanner shows that there is still one open membership fee 2019 from DRESSER Rand. On this invoice there was already a penalty fee of € 500,- added.

There were no further questions to this explanation and the financial planning was presented next.

- For 2020 we have to plan with costs of 30 k€ as cancellation costs of the conference
- The board planned income from a training webinar

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3. Report of the auditor by Mr. Th. Heumesser

Mr. Heumesser visited the EFRC Office for the annual audit. He thanked Ms. Maja Schütz for the excellent bookkeeping. All bookings have been done properly.

EFRC paid a lot of money in 2019 (~2.000 €) for banking fees, costs from the shop etc. Here we could save money. → as we didn't implement the shop anymore in our website we will save costs for payments via shop (author's note).

Payment behavior was in 2019 much better than in previous years. But collection agency had to be used again.

Mr. Heumesser again explained both different accounts of EFRC and emphasised the need to split the payments:

R&D Working Group payments to the R&D account:

IBAN: DE 74 8707 0024 0502 0409 01 (for R&D)

Annual membership fees to the general account of EFRC:

IBAN: DE04 8707 0024 0502 0409 00.

The aim is to avoid work for shifting the money from one account to the next.

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4. Agree on budget & Vote on release of the board & Vote for the 2nd auditor

Release of the board:

Mr. Heumesser advised the board to be released, voting on this was done:

Pro: 23

Contra: 0

Neutral: 1

Total Votes: 24.

The board was released.

Questions in the chat have been immediately answered by the EFRC team.

Vote for the 2nd auditor as well as for the agreement on the budget for 2020 have been postponed to the end of the meeting but for logical reasons will be placed here:

Vote for the 2nd auditor:

The board and Mr. Heumesser explained that the 2nd auditor only needs to replace the 1st auditor when he will not be able to perform the audit. Mr. Alexander Peters from Neuman & Esser volunteered to be the 2nd auditor as he already had been some years ago.

Vote for A. Peters as 2nd auditor:

Pro: 26

Contra: 0

Neutral: 1

Total Votes: 27.

The board thanked Mr. Alexander Peters for volunteering. Mr. Peters accepted the vote.

Vote for the budget for 2020:

Pro: 20

Contra: 0

Neutral: 3

Total Votes: 23.

Matthias Tanner answered a question from Wijnand Schoemakers in the chat regarding the support of the Standardisation Group through EFRC again. He pointed out that the board decided to use the planned 20k€ for the student workshop for the support of the Standardisation Group.

The budget for 2020 was agreed. Mr. Tanner thanked for the trust and hold out a handover in the way that things will go smoothly forward.

Reports of the working groups and outlook

5. Standardisation by Mr. A. Eijk, Chairman

Mr. Andre Eijk gave a short update on the achievements from 2019.

- The constitution of the new official Standardisation Working Group happened
- Important documents like charter etc. have been defined
- The new WG consists of 8 members bringing 37.5 k€
- 5 ideas for new projects, i.e. new guidelines
- In April 2020 new report on the “Inventory of Emissions of Reciprocating compressors” was released → articles and advertisements in CompressorTech2, Gas Compression Magazine and LinkedIN are planned

Mr. Eijk presented items on standardisation and guidelines regarding API 618, API 688 and ISO TC project: “condition Monitoring of Reciprocating Compressors”. The last mentioned project can only be a success if recip experts – EFRC members – will join the group. Mr. Eijk encouraged the EFRC members to **join this project group**.

Mr. Eijk stated what will be done in 2020:

- Election of new chairman
- New project: “Flow metering errors in pulsation flow”
- Webinar for Standardisation Group members. The first webinar of the new WG will be open to all members

Matthias Tanner presented the CV of Paul Modern who volunteers to become the new chairman of the Standardisation WG.

Vote for Mr. Paul Modern as Chairman of the Standardisation Working Group

Pro: 22

Contra: 0

Neutral: 0

The total votes of 22 votes showed that again not all participants have voted.

Mr. Paul Modern was elected for being the new chairman. Congratulations via chat.

The board thanks Andre Eijk for all his work in setting up the standardization group.

For more details and information please refer to the presentation on the share point site:

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6. Pre-competitive research by Dr. M. Langela, Chairman

Mr. Marc Langela took the word and presented the R&D Working Group update.

- 20 members in 2020
- Budget for R&D Work in 2020: 166 k€
- 5 active projects in progress, nearly finished
- Very efficient and successful R&D online meeting the day before. M. Langela thanked all 15 participants.
- 6 new proposals have been discussed in the online meeting the day before. The voting is open now for the R&D Group itself

Mr. Langela presented the 5 active projects:

- a. Andre Eijk (TNO) is very active in the Survey about compressor reliability.
- b. Split Packing Housing by TU Dresden. This is a new concept of designing a piston rod packing
- c. Improved Ring Concept (IRINCO) by Wentzel Dynamics – deals about temperature distribution at the sealing ring across the rod and how to improve it

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- d. Toroidal Damper Project by TNO and Wentzel Dynamics – is about new damper concept
 - e. Anomaly Detection by Can Tümer, TNO deals about analysis of compressor data in order to find anomaly compressors datas

Mr. Langela presented the six new project proposals:

- a. Constrained Layer Damping for SBC (small bore connections) by TNO – viscoelastic material is used for improvements regarding piping
- b. New Laser Technologies for Recips by TU Dresden – lot of different laser technologies outside. Which LT are applicable for reciprocating compressors?
- c. Improved Ring Concept – phase 2 by Wentzel Dynamics – includes new temperature measurements and improvement of the calculation model
- d. Remaining Useful Lifetime (RUL) by TNO – analysing data in order to get a good estimation of the remaining lifetime of a product
- e. Split Packing Prototype – phase 2 by TU Dresden – includes production of such a split packing and physical testing at a test compressor
- f. Oil film Detection by Wentzel Dynamics – detection of the oil within a cylinder to ensure correctly done lubrication

Jost Anderhub from PROGNOST asked about current members in the RUL project group. Mr. Langela answered that only TNO joins as this is a project by TNO but that in other projects R&D members support the executing party.

Later Mr. Langela showed the upcoming meetings and tasks. He hopes that the group can meet physically on October, 30th, in Stassfurt at STASSKOL. The results of R&D projects will be presented at the next EFRC Conference. The R&D Charter will be finalised in October.

Universities are invited to the group and the meetings free of charge to generate additional ideas.

To everyone: Join the Group now!

For more details and information please refer to the presentation on the share point site: <https://ckdt.sharepoint.com/sites/EFRCGeneralAssembly2020Globally/>

7. EFRC Training – Mr. L. Van Lier, Chairman

Leonard van Lier welcomed all and presented ongoing activities and those from 2019.

Look back to the training event in June 2019 at the TNO office in delft:

- quite successful
- Nice team of speakers from EFRC community
- Relative large number of participants (35), majority from EFRC
- Slight positive financial result, after subtracting the EFRC overhead costs slightly negative result
- Be aware of that next time
- Event was rated positively by participants
- To attract people remains a point of attention

Conference Training 2020

- Shifted to next year
- Organized by TNO for EFRC
- Speakers already found
- In depth-topic: “Trouble-Shooting Techniques of Reciprocating Compressors”
- Training session in the morning of the 1st conference day
 - 6 presentations á 30 min for experienced audience
- Status:
 - Presentations in preparation
 - Presentations shared electronically, no hard copies, only USB Stick
- Conclusion: Attractive content for a rel. small additional fee

Please distribute the information about this training within you company and network

M. Tanner stated he sees the chance for a webinar, people got more and more familiar with such devices like vicos etc., companies save travel costs. Money for the webinar training is foreseen in budget for 2020.

For more details and information please refer to the presentation on the share point site: <https://ckdt.sharepoint.com/sites/EFRCGeneralAssembly2020Globally/>

Annual work plan

8. 12th EFRC Conference 2020 Warsaw by Mr. Ch. Prinz on behalf of Ms. A. Parnigoni (task force lead)

Christian Prinz welcomed everyone and spoke on behalf of Ms. Anja Parnigoni who leads the Conference Task Force.

Christian Prinz announced that the EFRC Conference had to be postponed for safety- and financial reasons to March 9-11, 2021. Unfortunately the cancellation costs will eat up our buffer of 30 k€ we usually have for the conferences. But the risk to execute the conference this year would be much higher.

The organisation team already acquired 7 conference sponsors and some exhibitors. Mr. Prinz asked the conference sponsors to do their payments in Q4/2020 or Q1/2021.

New call for sponsors and for exhibitors after the summer break in Q4/2020 or Q1/2021.

Mr. Prinz gave a short preview of the programme. This time EFRC switches to the days Tuesday – Thursday instead of the traditional days Wednesday – Friday to avoid the rush out on Friday from 2 o'clock.

Question: Will the papers review continue? Answer: Yes. In agreement with Prof. Herbert Steinrück, lead of the papers review, they decided to keep the papers as they are. There will be no reissue of the call for papers.

In the chat Prof. Steinrück stated that the paper review deadlines will be kept as they are. All reviewers should deliver in time.

For more details and information please refer to the presentation on the share point site:
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9. Point of discussion joint VDMA conference and Participation at KRMS conference by René Peters, chairman

Rene Peters, chairman of the EFRC, explained the need for a vote for a joint conference with VDMA. The next joint Conference with VDMA (International Rotating Equipment Conference) was planned for 2022. See MoM from GA 2019. As we had to postpone our EFRC Conference from 2020 to 2021 the opinion of the EFRC members is needed if they still feel comfortable with a joint Conference with VDMA in 2022:

Gunther Machu points out that there are 35 companies with 32 votes in the call. He asked participants to raise hands if they have problems with voting.

Vote for a Joint Conference with VDMA in 2022:

Pro: 26

Contra: 1

Neutral: 1

Total votes: 28.

Rene Peters announced that EFRC will continue discussions about the collaboration with VDMA.

Vote on participation of EFRC at KRMS/Cooperation with KRMS was deleted as the GA already voted on that in 2019.

10. Marketing by Gunther Machu, secretary and Maja Schütz, office manager

Gunther Machu reminds members on the call for candidates for the marketing manager position because Martina Frenz had to resign from this position. Some people like A. Parnigoni, Ch. Prinz and M. Schütz jumped in help to fulfill the tasks short time. But it would be very beneficial for our association if we would have a dedicated Marketing Manager to push advertising, to push the recognition of our association.

The call for candidates is still ongoing. Please volunteer and help. Please send CV. The voting for this positions can also be done subsequently online.

Our organisation can only progress if people are willing to take leading positions. EFRC is all about us!!

The presentation of the new EFRC website by Ms. Maja Schütz followed. Ms. Schütz first of all thanked the website team consisting of Anja Parnigoni, Christian Prinz, Marc Langela, Emanuela Turriano and Davide Pozzoni (both from SIAD) as well as the website agency, Domeniceau Design. She shortly pointed out the main achievements of the work for the new website.

Then Ms. Schütz demonstrated and explained the design, structure and content of the new website. She also showed new and old features and plugins.

The new website was received very well and members released many positive comments in the chat.

Mr. Tanner furthermore pointed out that with the new website EFRC also saves money through the change of the supplier, through a maintenance package with Domeniceau Design, through using free software and through deletion of not needed additional domains. He thanked Ms. Schütz for the brilliant work.

Jost Anderhub from PROGNOT asked if the content of the TUTORIAL section also has been refreshed. Ms. Schütz answered that a student of a higher degree is working on this. **Christian Prinz emphasized the need for the input from the members for the tutorial section. Every member should approach Maja with updated information and new technologies.**

Answering a question from Leonard van Lier about the continuation of the web shop Matthias Tanner stated that the board decided to delete the web shop as the costs for the shop and the payments were not in balance with the amount of members who used it.

11. Vote on EFRC Board positions

Gunther Machu took the word and stated that all positions are open again and all three board members already did a full term or more. The board tried to find successors in a call for candidates which Ms. Schütz sent out several weeks ago.

Mr. Machu said that Franzisko Maywald from Burckhardt Compression volunteered as candidate for the position of the Cashier.

Unfortunately, there were no applications for the other board positions so *Gunther Machu and René Peters decided to do one more year as secretary resp. as chairman. René Peters pointed out the benefit of "fresh people" for the association.*

Vote for Mr. Franzisko Maywald as new cashier of the EFRC

Pro: 25

Contra: 0

Neutral: 0

Total Votes: 25

F. Maywald was elected unanimous, thanked all for the trust and accepted the vote.

Vote for Dr. René Peters as chairman of the EFRC for one more year

Pro: 26

Contra: 0

Neutral: 0

Total votes: 26

R. Peters was elected unanimous, thanked all for the trust and accepted the vote.

Vote for Dr. Gunther Machu as secretary of the EFRC

Pro: 25

Contra: 0

Neutral: 0

Total Votes: 25

G. Machu was elected unanimous, thanked all for the trust and accepted the vote.

Participants of the GA congratulated all three board members in the chat.

Rene Peters summarised that the board is complete and can continue for the next year. He thanked Matthias Tanner for the great job as cashier during the last years. EFRC was financially very successful thanks to Matthias Tanner. Mr. Peters expressed his hope to hand over a present in a face-to-face meeting next year. He trusts that Matthias has selected a very good successor.

The group express their Thankyous to Matthias Tanner in the chat.

12. Next Meetings by René Peters, chairman

A date for the next GA meeting was found. There is not yet a suggestion of a location/host. The call to **volunteer** to host is hereby addressed to all members. Volunteers shall address to the board or the EFRC Office.

Next GENERAL ASSEMBLY:

- April 23rd, 2021

R&D MEETING in 2021:

- April 22nd, 2021

13. Miscellaneous

René Peteres expressed his satisfaction with this efficient and successful meeting.

The board thanked Aniko Szabo, the assistant of Matthias Tanner and Maja Schütz for the preparation of the event in the background.

The board closed the meeting.

Please note: for the votings the number of participants varied, depending on internet connections, technical problems or temporary leave from the meeting. But this didn't effect the results of the votings in any way.

Recording clerk:

Maja Schütz, EFRC Office manager

Dresden, May 6th, 2020

APPENDIX:**A Participants list:**

Participation General Assembly webinar April 24th, 2020							
No.	Company		Titel	First Name	Family Name	Entitled to vote yes/no GA	Present at GA April 24th, 2020
1	ARIEL Corporation		Mr.	Ray	Shaw	yes	✓
2	Atelier Francois		Mr.	Vincent	D'Oultremont	yes	✓
3	Baker Hughes /GE Nuovo Pignone		Mr.	Alessio	Capanni	yes	✓
4	Burckhardt Compression AG		Mr.	Matthias	Tanner	yes	✓
5	Burckhardt Compression		Frau	Aniko	Szabo	no	✓
6	Burckhardt Compression		Mr.	Franzisko	Maywald	no	✓
7	Compressor Products International GmbH		Mr.	Ulrich	Wetzel	yes	✓
8	Compression Service Technology SRL		Mr.	Cosimo	Carcasci	yes	✓
9	COMPRESSORtech2		Ms.	Gabriele	Dinsel	yes	✓
10	Cook Compression		Mr.	Claudius	van den Berk	yes	✓
11	COZZANI		Mr.	Andrea	Raggi	no	✓
12	COZZANI		Ms.	Francesca	Cozzani	yes	✓
13	Dynaflow Research Group bv		Mr.	Wijnand	Schoemakers	yes	✓
14	Gasunie (N.V. Nederlandse Gasunie)		Mr.	Robbert	Pol	yes	✓
15	HOERBIGER		Mr.	Gunther	Machu	no	✓
16	HOERBIGER		Mr.	Christian	Prinz	yes	✓

17	Kötter Consulting Engineers	Mr.		Jan	Steinhausen	yes	✓
18	Leobersdorfer Maschinenfabrik GmbH	Mr.		Vasillaq	Kacani	yes	✓
19	LONZA	Mr.		Beat	Jossen	yes	✓
20	NAM	Mr.		Rufus	Bakker	yes	✓
21	Neuman & Esser	Mr.	Dr.	Alexander	Peters	yes	✓
22	PROGNOST Systems GmbH	Mr.		Jost	Anderhub	yes	✓
23	REPSOL	Mr.		Alberto	Pettenati	yes	✓
24	Sauer Compressors	Mr.		Thomas	Heumesser	yes	✓
25	Shell Deutschland Oil GmbH	Mr.		Guido	Kluth	yes	✓
26	SIAD M.I.	Mr.		Massimo	Maffeis	yes	✓
27	SKF	Mr.		Ralf	Becker	yes	✓
28	STASSKOL GmbH	Mr.	Dr.	Marc	Langela	yes	✓
29	TNO	Mr.		André	Eijk	no	✓
30	TNO	Mr.		René	Peters	yes	✓
31	TNO	Mr.		Leonard van	Lier	no	✓
32	TU Dresden / EFRC office	Frau		Maja	Schütz	no	✓
33	TU Dresden	Mr.		Konrad	Klotsche	yes	✓
34	TU Wien	Mr.		Herbert	Steinrück	yes	✓
35	Wetzel Dynamics	Mr.		Cyril	Wentzel	yes	✓
						Entitled to vote yes/no	Present
						27	35

B Members list:

EFRC Member			Representative
No.	Admission	Company	Representative Name
1	2019	Air Liquide Austria GmbH	Dipl.-Ing. Dr. Wolfgang Grillhofer
2	2019	Aramco Overseas Company B.V.	Manolo I. Koolman
3	2004	Ariel Corporation	Ray Shaw
4	2004	Ateliers Francois SA	Vincent d'Oultremont
5	2000	BASF SE / Abt. GTG/RR - U 427	Heinrich Ochs
6	2002	BORSIG ZM Compression GmbH	Andi Ziermann
7	1999	Burckhardt Compression AG	Matthias Tanner
8	2008	Compressor Products International GmbH	Ulrich Wetzel
9	2006	COMPRESSORtech2 (KHL Group)	Mike Brezonick
10	2008	COOK COMPRESSION LTD	Dean Lewis
11	2006	Dott. Ing. Mario Cozzani s.r.l.	Francesca Cozzani
12	2009	C.S.T. - Compression Service Technology S.r.l.	Andrea Fusi
13	2009	DRESSER-RAND a Siemens Business	Dave O'Brien
14	2014	Dynaflow Research Group BV	Wijnand Schoemakers
15	2011	Baker Hughes, a GE Company - Bently Nevada	Gaia Rossi
16	2009	Baker Hughes, a GE Company - Nuovo Pignone	Alessio Capanni
17	1999	HOERBIGER Wien GmbH	Dr. Gunther Machu
18	1999	Howden Thomassen Compressors B.V.	Niek Albers
19	1999	innogy Gas Storage, s.r.o.	Jiří Kafka
		innogy Gas Storage NWE GmbH	
20	2010	ITW/Performance Polymers (member EFRC)	Thomas Bausmann
		EMHA BV (member R&D)	Theo de Kok

21	2013	KÖTTER Consulting Engineers GmbH & Co. KG	Dr. Johann Lenz
22	1999	Leobersdorfer Maschinenfabrik GmbH	Dr.-Ing. Ernst Huttar
23	2009	Lonza AG	Beat Jossen
24	2015	NAM (Nederlands Aardolie Maatschappij B.V.)	Rufus Bakker
25	1999	Neuman & Esser GmbH & Co. KG	Alexander Peters
26	2017	N.V. Nederlandse Gasunie	Robbert Pol
27	2001	PROGNOST Systems GmbH	Eike Drewes
28	2012	PSE-Engineering GmbH	Dirk Heyer
29	2014	Repsol S.A.	Cesar Fernandez Valdes
30	2017	ROESEN GmbH	Jan-Friedrich Walther
31	2004	RWTH Aachen, Lehrstuhl für Verbrennungskraftmaschinen	Dr.-Ing. Marco Günther
32	2015	Sauer Compressors (J.P. Sauer & Sohn Maschinenbau GmbH)	DI Thomas Heumesser
33	2011	Shell Deutschland Oil GmbH	Guido Kluth
34	2008	SIAD Macchine Impianti S.p.A.	Massimo Maffei
35	2018	SKF Lubrication Systems Germany GmbH	Markus Boose
36	2010	STASSKOL GmbH	Dr. Marc Langela
37	1999	TNO	Dr.-Ing. René Peters (Dr. M.Sc.)
38	1999	TU Dresden, Institut für Energietechnik	Prof. Dr.-Ing. Ullrich Hesse
39	2012	Technische Universität Wien	Prof. Dr. Herbert Steinrück
40	2015	TOTAL Refining and Chemicals	Jean Christophe Courcol
41	2019	Wentzel Dynamics	Cyril M. Wentzel
42	2013	Windrock Incorporated (Inc.)	Pier F. Parisi