

AGENDA

for ASM International N.V.'s (the “Company”) Annual General Meeting of Shareholders, to be held on Monday May 18, 2020, at 2:00 p.m. CET at the Company’s office, Versterkerstraat 8, Almere, the Netherlands.

1. Opening / Announcements
2. Report on the financial year 2019
3. Remuneration Report 2019 *
4. Remuneration Policy *
5. Adoption of the Annual Accounts 2019 *
6. Adoption of dividend proposal *
7. Discharge of the members of the Management Board *
8. Discharge of the members of the Supervisory Board *
9. Composition of the Management Board *
10. Composition of the Supervisory Board *
11. Amendment Articles of Association *
12. Appointment of the Company's auditor for the financial year 2020 *
13. Designation of the Management Board as the competent body to issue common shares and rights to acquire common shares and to set aside any pre-emptive rights *
14. Authorization of the Management Board to repurchase common shares in the Company *
15. Withdrawal of treasury shares *
16. Any other business
17. Closure

* = voting item(s)

EXPLANATORY NOTES TO THE AGENDA

for ASM International N.V.'s Annual General Meeting of Shareholders, to be held on Monday May 18, 2020, at 2:00 p.m. CET at the Company's office, Versterkerstraat 8, Almere, the Netherlands.

Agenda Item 2 Report on the financial year 2019

This item will be discussed.

The Management Board will report on the business and results of operations for the financial year 2019.

Agenda Item 3 Remuneration report 2019

This item will be voted on.

The Remuneration report 2019, comprises (i) the remuneration report drawn up by the Management Board, and approved by the Supervisory Board, prepared in accordance with section 2:135b of the Dutch Civil Code, incorporated in the Dutch Civil Code with effect from 1 December 2019 to implement the revised Shareholder Rights Directive ("SRDII"), and (ii) the remuneration report, drawn up by the Supervisory Board, as meant in the Dutch Corporate Governance Code. The remuneration report 2019 is included on page 86 - 92 of the Annual Report 2019. The Annual Report 2019 is available at the Company's website (www.asm.com).

In accordance with section 2:135b (2) of the Dutch Civil Code, the General Meeting of Shareholders may cast an advisory vote on the Remuneration report 2019. Shareholders are asked to vote in favor of the Remuneration report 2019.

Agenda Item 4 Remuneration Policy

The item will be voted on.

In accordance with section 2:135a (2) juncto section 2:145 of the Dutch Civil Code, it is proposed to amend and adopt the Company's Remuneration Policy, due to the expiry of the existing Remuneration Policy that was adopted by the Annual General Meeting of Shareholders on May 21, 2014. This amendment and adoption of the new Remuneration Policy includes the approval of the General Meeting of Shareholders in the meaning of section 2:135 (5) of the Dutch Civil Code.

This new Remuneration Policy as proposed follows a review, analysis and evaluation of the existing policy. The proposed Remuneration Policy fundamentally continues the existing Remuneration Policy principles and is updated for the outcomes of the review of the current policy, whereby maintaining

compliance with the Dutch Corporate Governance Code and alignment with the new Dutch legal requirements following the implementation of SRDII.

It is intended that this Remuneration Policy will be applicable for four years. Furthermore, the policy includes the remuneration principles applicable to the individual compensation of the Supervisory Board.

The proposed Remuneration Policy can be found on the Company's website www.asm.com, which proposed Remuneration Policy forms part of this agenda and explanatory notes.

A clarification of the main differences between the current Remuneration Policy as adopted in 2014, and the Remuneration Policy as proposed, has also been posted on the Company's website (www.asm.com).

Agenda Item 5 Adoption of the Annual Accounts 2019

This item will be voted on.

The Annual Report 2019 (which includes the Directors Report 2019 and the Annual Accounts 2019, as well as the information to be added under section 2:392(1) of the Dutch Civil Code, insofar as applicable to the Company), is available for inspection by the shareholders at the Company's offices at Versterkerstraat 8 in Almere, the Netherlands and at the offices of ABN AMRO Bank N.V., Gustav Mahlerlaan 10, in Amsterdam, the Netherlands. The Annual Report 2019 is also available at the Company's website (www.asm.com).

The Annual Accounts 2019 have been audited by the Company's accountant, KPMG Accountants N.V. The Annual Report 2019 is in English.

Agenda Item 6 Adoption of dividend proposal

These items will be voted on.

Agenda item 6 (a) Regular dividend

- 6 (a) The Company proposes to declare a regular dividend of €1.50 (one euro and fifty euro cents) per common share over 2019. The Company's policy regarding the regular dividend is to pay a sustainable dividend. The regular dividend increases 50% compared to the dividend paid over 2018. On October 30, 2019, the Company announced an interim dividend of €1.00 (one euro) per common share, as the Company had decided to bring forward part of the 2019 dividend in the form of an interim dividend in view of the cash position at that time. After the payment of the interim dividend of €1.00 (one euro) per common share on November 12, 2019, the remaining regular dividend payment will be €0.50 (fifty euro cents) per common share.

Agenda item 6 (b) Extra-ordinary dividend

- 6 (b) In addition to the foregoing the Company also proposes to declare an extra-ordinary dividend of €1.50 (one euro and fifty euro cents) per common share, as part of the Company's commitment to use excess cash for the benefit of its shareholders. This will bring the total dividend paid to shareholders over 2019 to €3.00 (three euro) per common share.

Once the dividends have been declared, the above mentioned remaining dividends of €2.00 (two euro) per common share will be made available on May 28, 2020 (payment date).

Agenda Item 7 Discharge of the members of the Management Board

This item will be voted on.

In accordance with Article 30.4 of the Articles of Association, it is proposed to the General Meeting of Shareholders to discharge the members of the Management Board from liability in relation to the exercise of their duties in the financial year 2019.

Agenda Item 8 Discharge of the members of the Supervisory Board

This item will be voted on.

In accordance with Article 30.4 of the Articles of Association, it is proposed to the General Meeting of Shareholders to discharge the members of the Supervisory Board from liability in relation to the exercise of their duties in the financial year 2019.

Agenda Item 9 Composition of the Management Board

This item will be voted on.

Agenda Item 9 Appointment of Mr. Benjamin Gek Lim Loh to the Management Board and appointment as CEO

In accordance with Article 18.1 of the Articles of Association, it is proposed by the Supervisory Board to appoint Mr. Benjamin Loh (56) for a period of four years expiring at the close of the Annual General Meeting of Shareholders in 2024 as a member of the Management Board. The Supervisory Board has therefore drawn up a binding nomination in accordance with Article 18.1 of the Articles of Association and section 2:133 of the Dutch Civil Code to appoint Mr. Benjamin Loh to the Management Board. Upon his appointment to the Management Board, the Supervisory Board will appoint Mr. Loh as Chief Executive Officer, President and Chairman of the Management Board.

Mr. Loh worked for Oerlikon Corporation from the late nineties until 2005. He became Senior Vice President in 2002 and responsible for Asia until 2005. After that he joined Veeco Instruments Inc – the American thin film process semiconductor equipment manufacturer - as senior executive. At first as Senior Vice President and General Manager for Asia, and later as Executive Vice President responsible for global field operations. He then moved on to FEI Company in 2007 as senior executive holding various executive positions responsible for sales and service, global business operations and his last role was that of Chief Operating Officer. After that he joined in 2015 the Swiss based VAT Vacuum Valves company and became the Executive Vice President and member of the Group Management Board where he was responsible for and lead the worldwide sales and marketing until late 2017.

Mr. Loh also held positions as a non-executive director in several companies (Schneeberger, Swiss listed Schweiter Technologies AG, and Liteq BV) and was an advisory board member of Semi China. Mr. Loh has ample experience in the semiconductor industry.

Given the vast experience as a leader and with a wealth of experience working in the electronics and semiconductor industry, Mr. Loh can make significant contributions which will benefit the Company.

Mr. Loh has a bachelor degree in electronics engineering from the Tohoku University in Japan. He has the Singaporean nationality and lives most of his time in Japan, Singapore and The Netherlands. Furthermore he currently does not hold shares in the Company.

The remuneration package of Mr Loh shall consist of a base salary of €30,000, in combination with an at target short term cash incentive of 100% of base salary, and an at target long term share incentive of 165% of base salary. Both the long term share incentive and short term cash incentive are dependent on realizing certain predefined targets.

Agenda Item 10 Composition of the Supervisory Board

As announced on March 10, 2020, Mr. Ulrich Schumacher will retire as Supervisory Board member as per the Annual General Meeting of Shareholders. The Supervisory Board has decided to expand from five seats to six seats. In line therewith the Supervisory Board has nominated two candidates, Mrs. de Virgiliis and Mr. Lamouche. Furthermore the Supervisory Board, in line with the rotation scheme has nominated Mr. Van Pernis for another and final two years.

These items will be voted on.

Agenda Item 10(a) Appointment of Mrs. Monica de Virgiliis to the Supervisory Board

10 (a) In accordance with Article 22.3 of the Articles of Association and section 2:133 of the Dutch Civil Code, the Supervisory Board has drawn up a binding nomination to appoint Mrs. Monica de Virgiliis to the Supervisory Board with effect from the date of this Annual General Meeting of Shareholders for a four-year period expiring at the close of the Annual General Meeting of Shareholders in 2024.

Mrs. de Virgiliis started her career at Magneti Marelli as a manufacturing engineer. A few years later she started to work for STMicroelectronics where she made a career until 2015 and fulfilled numerous roles. She was the vice president of Systems and Business Development within the Personal Media Group from 2004 until 2006. After which she became the general manager for the Home Video Division. From 2007 until 2010 she became the Vice President and General Manager Wireless Multimedia for the joint venture between STMicroelectronics and Ericsson. Thereafter she moved into the role of restructuring different activities in the STMicroelectronics portfolio until 2013, after which she became the Corporate Vice President for Strategy and Development. She joined in 2015 Infineon Technologies as General Manager for the microcontrollers, which was followed by a role in Octo Telematics where her assignment was to integrate their new acquisition. Until mid-2019 she worked as the Chief Strategy Officer of CEA which is the French Atomic & Alternative Energy Commission.

As Mrs. de Virgiliis has made a career in the technology and semiconductor industry in technical, strategic and commercial functions, she has a lot of knowledge and experience in these industries, and therefore can add significant value to the Company.

Mrs. de Virgiliis is currently also non-executive director at the Prysmian Group – a company listed in Milan – and Geodis, which is part of the SNCF Group.

Mrs. de Virgiliis studied at the University of Turin (Politecnico di Torino) where she received her master degree in electronic engineering summa cum laude. She is 52 years old, double nationality Italian and French and is furthermore independent as per the Corporate Governance Code. She currently does not hold shares in the Company.

Agenda Item 10 (b) Appointment of Mr. Didier Lamouche to the Supervisory Board

- 10 (b) In accordance with Article 22.3 of the Articles of Association and section 2:133 of the Dutch Civil Code, the Supervisory Board has drawn up a binding nomination to appoint Mr. Didier Lamouche to the Supervisory Board with effect from the date of this Annual General Meeting of Shareholders for a four-year period expiring at the close of the Annual General Meeting of Shareholders in 2024.

Mr. Lamouche started his career at the Philips Research Laboratory in 1981. He continued his career at IBM Microelectronics France, where he became plant manager. After a short employment at Motorola and again IBM in the US, he moved on to become the CEO of Altis Semiconductor in 1998 until 2003. After another senior executive role at IBM he was since 2005 the Chairman and CEO of the Bull Group until 2010. He then took on the position as Chief Operating Officer at STMicroelectronics (STM) and combined this with being the President and CEO of ST Ericsson; a joint venture between STM and Ericsson located in Switzerland until 2013. After that until late 2018 Mr. Lamouche became the CEO of Idemia (formerly Oberthur Technologies), the French based multinational company specialized in technology for authentication of payments and identity solutions including face recognition.

Mr. Lamouche has a vast experience in the semiconductor industry at both senior executive level as at board level, and this will certainly add value to the Supervisory Board.

Mr. Lamouche has also held several supervisory roles in the past in the semiconductor industry at Soitec and STMicroelectronics, and is currently the Chairman of the Supervisory Board of the German company Utimaco, and non-executive Chairman of the Board at Quadient. Mr. Lamouche is currently also member of the Supervisory Board of Adecco, the French based staffing company which is listed in Zurich.

Mr. Lamouche graduated in 1981 from the Ecole Centrale de Lyon as engineer, and has a PhD in semiconductor technology. He is 61 years old and a French national and is furthermore independent as per the Corporate Governance Code. He currently does not hold shares in the Company.

Agenda Item 10 (c) Reappointment of Mr. Martin van Pernis to the Supervisory Board

10 (c) Mr. van Pernis was initially elected as member of the Supervisory Board in May 2010 and was reappointed last on May 28, 2018 for a period of two years. In accordance with the applicable rotation scheme, the term of Mr. van Pernis' mandate expires at the end of this Annual General Meeting of Shareholders and it is proposed by the Supervisory Board in order to attain adequate continuity and experience within the Supervisory Board to reappoint Mr. van Pernis for an additional and final two-year period expiring at the close of the Annual General Meeting of Shareholders in 2022. The Supervisory Board has therefore drawn up a binding nomination in accordance with Article 22.3 of the Articles of Association and section 2:133 of the Dutch Civil Code to re-appoint Mr. van Pernis to the Supervisory Board.

Mr. van Pernis joined Siemens in 1971 and retired from the Siemens Group at the end of 2009 as Chairman of the Management Board of Siemens Nederland NV. Mr. van Pernis is Chairman of the Supervisory Boards of Aalberts NV, CM.com, CM Payments, Sacon Architects, the Rotterdams Philharmonic Orchestra and Member of the Advisory Board of G4S Netherlands and Optixolar BV.

Mr. van Pernis holds a Master's degree in Electrical Engineering from the Technical University Delft and Technical High School The Hague, the Netherlands, and a Master's degree in Law and Economics from the Erasmus University Rotterdam, the Netherlands. Mr. van Pernis is a Dutch national. Mr. van Pernis is furthermore independent as per the Corporate Governance Code. He is 75 years old and currently holds no shares in the Company.

With reference to Article 22.9 of the Articles of Association the Supervisory Board is pleased to confirm that Mr. van Pernis has more than adequately fulfilled his duties as a Supervisory Board member over the past years.

Agenda Item 11

Amendment Articles of Association

This item will be voted on.

In accordance with Article 34 of the Articles of Association, the Management Board and the Supervisory Board propose amending the Articles of Association relating to certain changes pursuant to the Implementation Act SRDII (the “**Proposal**”).

A more detailed explanation for the proposed amendments is included in the Proposal. The Proposal has been available for inspection at the Company's offices and at the offices of ABN AMRO Bank N.V., from the day of the notice convening this Annual General Meeting of Shareholders. The Proposal has also been posted on the Company's website (www.asm.com).

By a vote in favor of the proposed amendment the General Meeting of Shareholders shall be deemed to have authorized each member of the Management Board as well as each civil-law notary (notaris) and prospective civil-law notary (kandidaat-notaris) of Stibbe N.V. in Amsterdam to make any adjustments that are necessary as well as to sign and execute the relevant deed of amendment of the Articles of Association and to undertake all other activities as the authorized person deems necessary or useful.

Agenda Item 12

Appointment of the Company's auditor for the financial year 2020

This item will be voted on.

The external auditor is appointed by the General Meeting of Shareholders each time in respect of one financial year. On the advice of the Management Board and on the advice and recommendation of the Audit Committee, also based on the assessment of the functioning of the external auditor in relation to the Annual Accounts for the financial year 2020, the Supervisory Board proposes to appoint the current accountant, KPMG Accountants N.V., as the Company's external auditor for the financial year 2020. A representative of KPMG Accountants N.V. will attend the Annual General Meeting of Shareholders.

Agenda Item 13

Designation of the Management Board as the competent body to issue common shares and rights to acquire common shares and to set aside any pre-emptive rights

These items will be voted on.

Agenda Item 13(a) Designation of the Management Board as the competent body to issue common shares and rights to acquire common shares

13 (a) In accordance with Articles 5.1 and 5.6 of the Articles of Association, it is proposed that the General Meeting of Shareholders appoints the Management Board, for an 18-month period, to be calculated from the date of the Annual General Meeting of Shareholders, as the body of the

Company which, subject to the Supervisory Board's approval, is authorized to issue common shares – including granting the right to acquire common shares – at such a price, and on such conditions as determined for each issue by the Management Board, subject to the Supervisory Board's approval as may be required.

The number of common shares including rights to acquire common shares which the Management Board shall be authorized to issue shall be no more than 10% of the total currently issued capital of the Company in the form of common shares.

Agenda Item 13(b) Designation of the Management Board as the competent body to set aside any pre-emptive rights with respect to the issue of common shares and rights to acquire common shares

13 (b) In accordance with Article 7.5 of the Articles of Association, it is proposed that the General Meeting of Shareholders appoints the Management Board, for an 18-month period, to be calculated from the date of the Annual General Meeting of Shareholders, as the body of the Company which, subject to the Supervisory Board's approval, is authorized to limit or exclude any pre-emptive rights of existing shareholders if common shares or rights to acquire common shares are issued.

Pursuant to section 2:96a(7) of the Dutch Civil Code and in accordance with Article 7.6 of the Articles of Association, a resolution of the General Meeting of Shareholders to designate the Management Board as the competent body to limit or exclude any pre-emptive rights of existing shareholders, requires a majority vote of at least two thirds of the votes cast if less than 50% of the issued share capital of the Company is represented at the General Meeting of Shareholders.

**Agenda Item 14
Authorization of the Management Board to repurchase common shares in the Company**

This item will be voted on.

In accordance with Article 8.1 of the Articles of Association, it is proposed that the General Meeting of Shareholders authorizes the Management Board, subject to the Supervisory Board's approval, for an 18 month period, to be calculated from the date of the Annual General Meeting of Shareholders to cause the Company to repurchase common shares in the Company up to a maximum of 10% of the total currently issued capital at a price at least equal to the shares' nominal value and at most equal to 110% of the share's average closing price according to the listing on the Euronext Amsterdam stock exchange during the five trading days preceding the purchase date.

Agenda Item 15
Withdrawal of treasury shares

This item will be voted on.

In order to optimize the Company's capital structure and in accordance with Article 9 of the Articles of Association and the requirements of section 2:99 and 2:100 of the Dutch Civil Code, it is proposed to the General Meeting of Shareholders to decrease the issued share capital of the Company by withdrawing 1,500,000 (one and a half million) common shares each with a par value of €0.04 which the Company currently holds in its own capital. The Company announced its intention to cancel 1.5 million common treasury shares on February 25, 2020, as the total number of approximately 2.4 million common treasury shares held at that time were more than sufficient to cover the outstanding options and restricted/performance shares.

Pursuant to section 2:99(6) of the Dutch Civil Code, a resolution of the General Meeting of Shareholders to decrease the capital of the Company requires a majority vote of at least two thirds of the votes cast if less than 50% of the issued share capital of the Company is represented at the General Meeting of Shareholders.

Pursuant to section 2:100(3) of the Dutch Civil Code, a resolution of the General Meeting of Shareholders to decrease the capital of the Company must be deposited at the Trade Register of the Dutch Chamber of Commerce and a notice of such deposition must be published in a national daily newspaper. Within two months after such publication creditors of the Company may oppose to the resolution to reduce the capital of the Company. Pursuant to section 2:100(5) of the Dutch Civil Code, the resolution to reduce the capital of the Company shall only be effective after the expiry of the two month period or, in the event of any creditors' opposition, after all objections are withdrawn or removed.

Agenda Item 16
Any other business
