

# 全球 电机系统 网络



EMSA 通讯：2011 第 3 期（English version below）


2011 年 11 月，苏黎世：

期待明年 12 月在电机峰会 2012 上，在苏黎世与各位相会！

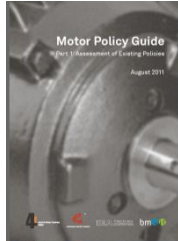
1	<p>这是电动马达系统附录（EMSA）的最新通讯。我们期刊的订阅用户已经增长到了 2468 人，来自 67 个不同国家。</p> <p>全球电机系统网是 EMSA 在国际能源署的 4E（<a href="#">高效电气终端设备</a>）执行项目中的一个延伸项目。</p>	
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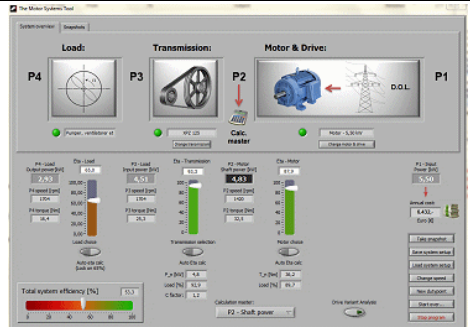
活动		
2	<p><b>EEMODS'11</b> 已于今年 9 月 12 日至 14 日在美国弗吉尼亚州亚历山德里亚召开（华盛顿附近）。本届年会在 21 场会议中向大家展示了 70 多篇论文。EMSA 成员的演讲包括：</p> <ul style="list-style-type: none"> <li>• <a href="#">Conrad U. Brunner</a>: 电动机与整机系统的统一标准</li> <li>• <a href="#">Konstantin Kulterer</a>: 电动机政策指引</li> <li>• <a href="#">Sandie B. Nielsen</a>: 电动机系统工具</li> <li>• <a href="#">Sarah Hatch</a>: 测试中心网络</li> <li>• <a href="#">Rita Werle</a>: EMSA——国际工作</li> <li>• <a href="#">Rita Werle</a>: 瑞士经济激励项目 EASY 高效电机系统的初步成果</li> </ul> <p>EEMODS'11 控制工程：</p>	<p><b>ee mods'11 conference</b> energy efficiency in motor driven systems Alexandria, VA (USA), September 12 to 14, 2011</p> <p>议程：<a href="http://www.eemods.org">www.eemods.org</a> EMSA 论文： <a href="http://www.motorsystems.org/motor-events">www.motorsystems.org/motor-events</a></p> <p><a href="#">Part 1 / Part 2</a></p>
3	<p>下一届<b>电机峰会</b>将于 <b>2012 年 12 月 5 日至 6 日</b>在瑞士苏黎世召开。注册程序将在明年春季开放。</p> <p>上届电机峰会 2010 的演讲、议程以及相片：</p>	<p><b>MOTOR SUMMIT 2012</b> <a href="http://www.motorsummit.ch">www.motorsummit.ch</a></p>
4	<p>第七届<b>商业建筑能效改进</b>国际会议（IEECB'12）将于 <b>2012 年 4 月 18 日至 19 日</b>，在德国法兰克福举行的照明+建筑交易会（Light+Building Trade Fair）上召开：</p> <p>论文征集： <a href="http://re.jrc.ec.europa.eu/energyefficiency/events.htm">http://re.jrc.ec.europa.eu/energyefficiency/events.htm</a></p>	


新闻	
<p>5 劳伦斯伯克利国家实验室 (LBNL) 的 Aimee McKane 与 Ali Hasanbeigi 在 EEMODS'11 上举办了一场关于“<b>建立电机专家网络</b>”的特殊会议。会上讨论了近期的有关如何基于可信数据来量化高效电机系统收益的透明方法的研究。</p> <p>更多信息与会议报告:</p>	 <p><a href="http://industrial-energy.lbl.gov/node/494">http://industrial-energy.lbl.gov/node/494</a></p>
<p>6 EEMODS'11 上的讨论就<b>强制执行电机最低能效标准</b>的政策手段取得了新的进展。对于机械中内嵌的电机有必要考虑使用带有射频识别芯片 (RFID) 的单独的铭牌。RFID 芯片目前被用于多种用途, 例如在一些信用卡或者生物护照中。</p>	
<p>7 <b>高效高速铜转子式感应电机</b>在电动车辆中可以实现更高的单位自重输出功率。一台净输出功率为 185 千瓦的 3 相 4 极感应电机可以在 0 rpm 下达到最大扭矩 270 牛米并维持相近扭矩直到 6000 rpm。</p> <p>更多信息: <a href="http://en.wikipedia.org/wiki/Tesla_Roadster#Motor">http://en.wikipedia.org/wiki/Tesla_Roadster#Motor</a></p>	
<p>8 <b>超效设备、电器部署 (SEAD) 倡议</b>提议在 2013 年举办<b>国际电机能效奖</b>。SEAD 是<b>清洁能源部长会议</b>的一项寻求政府及个人参与到高效设备与电器全球市场的倡议。</p> <p>更多信息: <a href="http://www.superefficient.org/activities/awards">www.superefficient.org/activities/awards</a></p>	 <p>如要获取项目更新信息, 请将你的联系方式电邮至: <a href="mailto:awards@superefficient.org">awards@superefficient.org</a></p>
<p>9 <b>加拿大电机最低能效标准</b>将于 2012 年 4 月 12 日正式生效, 标准根据 2011 年 10 月 12 日在 <b>Canada Gazette 第二部分</b>上发表的能效法规被定为<b>超高效</b>等级 (IE3)。</p>	
<p>10 日本<b>应用能源学院</b>根据 2009 年的数据发表了一项新的研究, 结果显示: 如果将所有电机更换为 IE3 电机, 日本每年可以节约 155 亿度电能。<b>在 2015 年, 电机也将成为 Top Runner Program 项目下的产品之一。</b></p> <p>更多信息参见 Takeshi Obata 的演讲: <a href="http://www.eemods.org/proceedings.html">www.eemods.org/proceedings.html</a></p>	

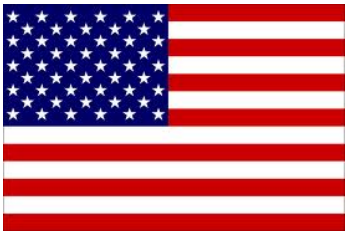
11	<p>在 2011 年 9 月的华盛顿会议就<b>能效等级标准 IEC 60034-30</b> 修订版委员会草案进行讨论。一部更新的草案将于近期发表。</p> <p>能效等级的范围将包括 0.12 至 800 千瓦的所有种类电机，以及超超高效电机 IE4 的定义。</p>	 <p>如要获取下一草案的拷贝，请电邮至： <a href="mailto:info@motorsystems.org">info@motorsystems.org</a> 索取。</p>
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**4E EMSA**

12	<p>EMSA 出版了<b>电机政策向导</b>第一部：现有政策评估。这份向导涵括了一项对世界各地（澳大利亚、中国、欧洲和美国）的现有电机系统政策手段的分析以及对成功政策设计的建议。</p> <p>免费下载： <a href="http://www.motorsystems.org">www.motorsystems.org</a></p>	
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13	<p>EMSA 公布了<b>电机系统工具</b>。此工具能够根据负载特性、传动种类、电机及控制设备计算整个电机系统的效率。它主要面向工程师、机械制造者、能源顾问以及其他在优化机械系统方面工作的人员。</p> <p>免费下载： <a href="http://www.motorsystems.org">www.motorsystems.org</a></p>	
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14	<p>EEMODS'11 的一个研讨会上，对 EMSA 澳大利亚准备的“<b>基于 IEC 60034-2-1 的电机测试方法的使用向导</b>”进行了讨论。</p> <p>研讨会的总结将于近期公布在： <a href="http://www.motorsystems.org">www.motorsystems.org</a></p>	
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15	<p>4E 电机系统项目 <b>EMSA</b> 已被<b>延长至 2014 年</b>。其工作将会专注于有关电机系统政策、能力培养、电机测试、国际标准以及国际交流等问题，尤其是通过与 <b>SEAD</b> 的合作。</p> <p><b>美国</b>在项目的下一阶段也会加入 <b>EMSA</b>。欢迎！</p> <p>如果你有意联系 EMSA 团队请直接访问： <a href="http://www.motorsystems.org/contact">www.motorsystems.org/contact</a></p>	 <p><a href="http://www.motorsystems.org/contact">www.motorsystems.org/contact</a></p>
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16	<p>感谢 <a href="#">日本电器制造商协会 (JEMA)</a> <b>EMSA 通讯</b> 从今往后也有了 <b>日语版本</b>。如果你希望你的日本朋友也收到我们的通讯, 请将他们的电邮地址发送到: <a href="mailto:info@motorsystems.org">info@motorsystems.org</a>。 <b>日本電機工業会 (JEMA)</b> のご協力により、<b>EMSA ニュースレター日本語版</b> の配信を開始しました。日本のモータシステム関係者への配信を希望される場合は、こちらまで E メールアドレスをお知らせください。 <a href="mailto:info@motorsystems.org">info@motorsystems.org</a>。</p>	
17	<p>从 <b>2012 年</b> 开始, <b>EMSA 通讯</b> 也会增加 <b>俄语版本</b>。如果你希望你的俄国朋友也收到我们的通讯, 请将他们的电邮地址发送到: <a href="mailto:info@motorsystems.org">info@motorsystems.org</a>。 <b>Начиная с 2012 г. информационный бюллетень будет также издаваться на русском языке.</b> Если Вы желаете чтобы ваши контакты русских моторных систем были включены в бюллетень, пожалуйста пошлите нам адреса их электронной почты по адресу <a href="mailto:info@motorsystems.org">info@motorsystems.org</a>。</p>	

发表文章		
18	<p>联合国工业发展组织 (UNIDO) 发表了 Aimee McKane 与 Ali Hasanbeigi 的“<b>电机系统效率供应曲线: 评估工业电机系统能效潜力</b>”。此报告估计了 5 个国家和欧盟的用于工业界的电机系统的整体 <b>技术节约潜能</b>:</p> <ul style="list-style-type: none"> <li>• 泵: 43%至 57%;</li> <li>• 压缩空气: 29%至 56%;</li> <li>• 风扇系统: 27%至 46%。</li> </ul> <p>更多信息: <a href="http://industrial-energy.lbl.gov/node/450">http://industrial-energy.lbl.gov/node/450</a></p>	
19	<p><b>IMS Research</b> 的最新预测表明, 全球低电压电机市场收入将会在今后几年迅速增长。在此期间, 市场上不同能效等级的电机的组成也会发生深远的改变, 到 <b>2015 年 IE2 电机</b> 将会占据一半的市场。 更多信息: <a href="http://imsresearch.com/news-events/press-template.php?pr_id=1876">http://imsresearch.com/news-events/press-template.php?pr_id=1876</a></p>	
20	<p><b>工业产量研究所</b> 发表了 Anibal T. de Almeida、Joao Fong 与 Hugh Falkner 的报告“<b>高能效工业技术最佳实践经验——电机系统</b>” 报告给出了在工业界减少温室气体排放和改进经济效率方面的最佳实践, 并包括了一个关于能效措施的数据库, <b>该数据库将会在明年以可搜索的形式以及友好的用户界面推出</b>。</p> <p>免费下载: <a href="http://www.iipnetwork.org/downloads/IIPmotorsystems_report11.pdf">http://www.iipnetwork.org/downloads/IIPmotorsystems_report11.pdf</a></p>	

如果你有任何疑问，欢迎随时向我们提出。如果你正在你所在国家负责电机能效项目，请务必告诉我们！

来自瑞士苏黎世的最诚挚的问候

Conrad U. Brunner & Rita Werle

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**EMSA 电动马达附录**，是国际能源署高效电气终端设备 **4E** 协议下的附录之一。目前，澳大利亚、奥地利、丹麦、荷兰、美国和瑞士都正在积极参与 **EMSA** 项目。同时，加拿大、法国、日本、韩国、南非、瑞典和英国也是 **4E** 参与国。

如果你想订阅此通讯或者下载有关背景资料，请访问：

[www.motorsystems.org/emsa-newsletter](http://www.motorsystems.org/emsa-newsletter)。

如果你需要退订此通讯，请电邮至以下地址：

[info@motorsystems.org](mailto:info@motorsystems.org) 谢谢合作！

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# Global Motor Systems Network



EMSA Newsletter no. 3/2011

Zurich November 2011:

See you all at the Motor Summit 2012 in Zürich in December 2012!

1	<p>This is the latest edition of the Electric Motor Systems Annex (EMSA) Newsletter. Our subscription has grown now to 2'468 people from 67 countries.</p> <p>Global Motor Systems Network is the outreach project of EMSA in the International Energy Agency's Implementing Agreement 4E: <a href="#">Efficient Electrical End-Use Equipment</a>.</p>	
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	<b>Events</b>	
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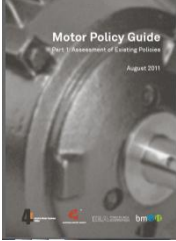
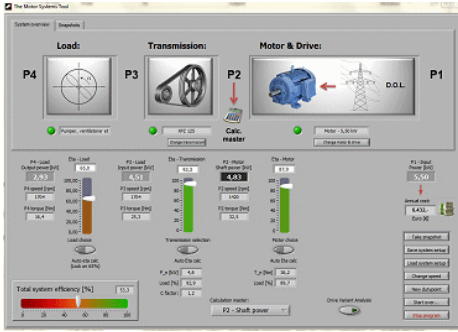


2	<p><b>EEMODS'11</b> was held on 12 - 14 September 2011 in Alexandria VA (near Washington DC). The program was organized in 21 sessions with more than 70 papers presented.</p> <p>From EMSA presentations were made by:</p> <ul style="list-style-type: none"> <li>• <a href="#">Conrad U. Brunner: Harmonized standards for motors and systems</a></li> <li>• <a href="#">Konstantin Kulterer: Motor Policy Guide</a></li> <li>• <a href="#">Sandie B. Nielsen: Motor Systems Tool</a></li> <li>• <a href="#">Sarah Hatch: Testing Centres Network</a></li> <li>• <a href="#">Rita Werle: EMSA – the global effort</a></li> <li>• <a href="#">Rita Werle: First results of the Swiss financial incentive program Easy for efficient motor systems</a></li> </ul> <p>EEMODS'11 in Control Engineering:</p>	<div style="background-color: black; color: white; padding: 5px;"> <b>ee mods '11 conference</b>              energy efficiency in motor driven systems         </div> <p>Alexandria VA (USA) September 12 to 14, 2011</p> <p><b>Proceedings:</b> <a href="http://www.eemods.org">www.eemods.org</a>  <b>EMSA papers:</b> <a href="http://www.motorsystems.org/motor-events">www.motorsystems.org/motor-events</a></p> <p><a href="#">Part 1</a> / <a href="#">Part 2</a></p>
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3	<p>The next <b>Motor Summit</b> will be held in Zurich Switzerland from <b>5 to 6 December 2012</b>. Registration will be open from spring 2012.</p> <p>Presentations, proceedings and photos of the last Motor Summit 2010 are available at:</p>	<p><b>MOTOR SUMMIT 2012</b>  <a href="http://www.motorsummit.ch">www.motorsummit.ch</a></p>
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4	<p>The seventh international conference on <b>Improving Energy Efficiency in Commercial Buildings</b> (IEECB'12) will take place in Frankfurt, Germany on <b>18 - 19 April 2012</b>, during the Light+Building trade fair.</p> <p>Call for papers:  <a href="http://re.jrc.ec.europa.eu/energyefficiency/events.htm">http://re.jrc.ec.europa.eu/energyefficiency/events.htm</a></p>	
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News	
<p>5 Aimee McKane and Ali Hasanbeigi from Lawrence Berkeley National Laboratory organized a special session at EEMODS'11 on "Creating a <b>Motor System Experts Network</b>". Recent research on a transparent methodology for quantifying the benefits of energy efficient motor systems based on reliable data was discussed. More information and session presentations:</p>	 <p><a href="http://industrial-energy.lbl.gov/node/494">http://industrial-energy.lbl.gov/node/494</a></p>
<p>6 Discussions on EEMODS'11 were ongoing on policy instruments to <b>enforce compliance with Minimum Energy Performance Standards</b> for motors. The use of individual identification on the rating plate with a <b>radio-frequency identification (RFID)</b> label is considered especially for motors embedded within machines. RFID chips are currently used for many purposes, e.g. in certain credit cards and biometric passports.</p>	
<p>7 <b>High efficiency and high speed copper rotor induction motors</b> in electric vehicles promise more power per unit of weight. A 3-phase, 4-pole induction electric motor, producing a maximum net power of 185 kW delivers a maximum torque of 270 N·m obtained at 0 rpm that stays almost constant up to 6 000 rpm.  More information: <a href="http://en.wikipedia.org/wiki/Tesla_Roadster#Motor">http://en.wikipedia.org/wiki/Tesla_Roadster#Motor</a></p>	
<p>8 <a href="#">Super-Efficient Equipment and Appliance Deployment (SEAD) Initiative</a> proposed an <b>international energy efficient electric motors award in 2013</b>. SEAD is an initiative of the <a href="#">Clean Energy Ministerial</a> that seeks to engage governments and the private sector to transform the global market for energy-efficient equipment and appliances. More information: <a href="http://www.superefficient.org/activities/awards">www.superefficient.org/activities/awards</a></p>	 <p>For program updates, email your contact information to: <a href="mailto:awards@superefficient.org">awards@superefficient.org</a></p>
<p>9 <b>Minimum Energy Performance Standards in Canada</b> formally take effect at <b>premium efficiency</b> level (IE3) on <b>12 April 2012</b>, according to Amendment 11 to the Energy Efficiency Regulations, published on 12 October 2011 in the <a href="#">Canada Gazette, Part II</a>.</p>	
<p>10 A new study, commissioned by the Agency of Natural Resources and Energy (ANRE) based on data for 2009, was published: 15.5 TWh/a electricity could be saved in <b>Japan</b>, were all motors to be replaced by IE3, according to the results of a survey conducted by <a href="#">the Institute of Applied Energy</a> in Japan. <b>Motors</b> will be included in the <b>Top Runner Program</b> with target year 2015.  More information in the presentation of Takeshi Obata: <a href="http://www.eemods.org/proceedings.html">www.eemods.org/proceedings.html</a></p>	

11	<p>The Committee Draft of the revision for the <b>standard on efficiency classes IEC 60034-30</b> has been discussed at the Washington meeting in September 2011. An advanced draft will be published shortly. The scope of the efficiency classes will include all kinds of electric motors between 0.12 and 800 kW, and the definition of Super Premium motors IE4.</p>	 <p>If you would like to have a next draft copy send an email to: <a href="mailto:info@motorsystems.org">info@motorsystems.org</a>.</p>
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4E EMSA		
12	<p>EMSA has published the <b>Motor Policy Guide – Part 1: Assessment of Existing Policies</b>. The guide includes an analysis of existing motor systems policy instruments in different parts of the world (Australia, China, Europe, USA) and recommendations for successful policy design.</p> <p>Free download: <a href="http://www.motorsystems.org">www.motorsystems.org</a></p>	
13	<p>EMSA has published the <b>Motor Systems Tool</b>. The Tool calculates the efficiency of a complete motor system, taking into account load characteristics, transmission, motor and controls. It is intended for engineers, machine builders, energy consultants and others working on optimizing machine systems.</p> <p>Free download: <a href="http://www.motorsystems.org">www.motorsystems.org</a></p>	
14	<p>The “<b>Guide for the Use of Electric Motor Testing Methods based on IEC 60034-2-1</b>”, prepared by Australia within EMSA, was discussed in a workshop at EEMODS’11.</p> <p>A summary of the workshop will soon be available at: <a href="http://www.motorsystems.org">www.motorsystems.org</a></p>	
15	<p>The 4E motor systems program <b>EMSA</b> has been <b>extended until 2014</b>. Work will be focused on issues associated with motor systems policy, capacity building, motor testing, international standards and international exchange - in particular liaison with the <b>SEAD</b> initiative. The <b>USA</b> is <b>joining EMSA</b> for the next program period. Welcome!</p> <p>If you would like to reach the EMSA team go directly to:</p>	 <p><a href="http://www.motorsystems.org/contact">www.motorsystems.org/contact</a></p>



16	<p>The <b>EMSA Newsletter</b> is from now on also available in <b>Japanese</b>, thanks to the cooperation with the <a href="#">Japan Electrical Manufacturers' Association (JEMA)</a>. If you would like to include your Japanese motor systems contacts: please send us their e-mail addresses to <a href="mailto:info@motorsystems.org">info@motorsystems.org</a>.  <a href="#">日本電機工業会 (JEMA)</a> のご協力により、<b>EMSA ニュースレター日本語版</b>の配信を開始しました。日本のモータシステム関係者への配信を希望される場合は、こちらまで E メールアドレスをお知らせください。  <a href="mailto:info@motorsystems.org">info@motorsystems.org</a>.</p>	
17	<p>From 2012, the <b>Newsletter</b> will be available in <b>Russian</b> as well. If you would like to include your Russian motor systems contacts: please send us their e-mail addresses to <a href="mailto:info@motorsystems.org">info@motorsystems.org</a>.  <b>Начиная с 2012 г. информационный бюллетень</b> будет также издаваться <b>на русском языке</b>. Если Вы желаете чтобы ваши контакты русских моторных систем были включены в бюллетень, пожалуйста пошлите нам адреса их электронной почты по адресу <a href="mailto:info@motorsystems.org">info@motorsystems.org</a>.</p>	

<b>Publications</b>		
18	<p>The United Nations Industrial Development Organization (UNIDO) has published “<b>Motor System Efficiency Supply Curves: Assessing the Energy Efficiency Potential of Industrial Motor Systems</b>” by Aimee McKane and Ali Hasanbeigi. The report estimates the total <i>technical saving potential</i> in five countries and the EU for motor systems in industry:</p> <ul style="list-style-type: none"> <li>• 43% to 57% for pumps,</li> <li>• 29% to 56% for compressed air,</li> <li>• 27% to 46% for fan systems.</li> </ul> <p>More information:  <a href="http://industrial-energy.lbl.gov/node/450">http://industrial-energy.lbl.gov/node/450</a></p>	
19	<p>Global low voltage motors market revenues to grow rapidly in coming years according to the latest forecast from <a href="#">IMS Research</a>. During this time there will also be a profound change in the market's composition by efficiency class, with <b>IE2 motors accounting for more than half the market by 2015</b>.  More: <a href="http://imsresearch.com/news-events/press-template.php?pr_id=1876">http://imsresearch.com/news-events/press-template.php?pr_id=1876</a></p>	
20	<p>The <a href="#">Institute for Industrial Productivity</a> published the report “<b>Best Practices in Energy Efficient Industrial Technologies – Motor Systems</b>” by Anibal T. de Almeida, Joao Fong and Hugh Falkner. The report identifies best practices to reduce greenhouse gas emissions and improve economic efficiency in the industrial sector. It contains a database of energy efficiency measures, which will be available as a searchable user-friendly database next year.</p> <p>Free download:  <a href="http://www.iipnetwork.org/publications_and_links.php">www.iipnetwork.org/publications_and_links.php</a></p>	

If you have any questions please feel free to ask. If you are running a national motor efficiency program: tell us!

Best regards from Zurich Switzerland,

Conrad U. Brunner & Rita Werle

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**EMSA is the Electric Motor Systems Annex of the International Energy Agency IEA Implementing Agreement on Efficient Electrical End-Use Equipment 4E. Currently Australia, Austria, Denmark, Netherlands, USA and Switzerland participate actively in EMSA. Canada, France, Japan, Korea, South Africa, Sweden and United Kingdom participate in other 4E Annexes.**

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