Korean Agency for Technology and Standards

Standard system of Agri. Machinery

2023. 2.
KATS (Korean Agency for Technology and Standards)

4 Bureau 20 Division

- Standard
- Conformity
- Safety
- Technical Regulation
Article 5, Paragraph (2) Where the Minister Trade, Industry and Energy intends to establish, amend, or abolish Korean industrial Standards, he or she shall undergo deliberation by the Council after consultation with the head of a relevant administrative agency.
## Agricultural machinery standards (ISO based)

<table>
<thead>
<tr>
<th>TC/SC</th>
<th>Secretariat</th>
<th>Title</th>
<th>Published ISO standards</th>
<th>Under development</th>
<th>KS Identification</th>
<th>Member status</th>
<th>GD (Korea)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC 23</td>
<td>AFNOR(FRA)</td>
<td>Tractors and machinery for agriculture and forest</td>
<td>35</td>
<td>3</td>
<td>15</td>
<td>P</td>
<td>16</td>
</tr>
<tr>
<td>SC 2</td>
<td>ANSI(USA)</td>
<td>Common tests</td>
<td>37</td>
<td>9</td>
<td>32</td>
<td>P</td>
<td>23</td>
</tr>
<tr>
<td>SC 3</td>
<td>DIN(DEU)</td>
<td>Safety and comfort</td>
<td>16</td>
<td>2</td>
<td>7</td>
<td>P</td>
<td>23</td>
</tr>
<tr>
<td>SC 4</td>
<td>DIN(DEU)</td>
<td>Tractors</td>
<td>57</td>
<td>4</td>
<td>34</td>
<td>P</td>
<td>23</td>
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<tr>
<td>SC 6</td>
<td>AFNOR(FRA)</td>
<td>Equipment for crop protection</td>
<td>51</td>
<td>11</td>
<td>6</td>
<td>P</td>
<td>16</td>
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<tr>
<td>SC 7</td>
<td>UNI(ITA)</td>
<td>Equipment for harvesting and conservation</td>
<td>26</td>
<td>5</td>
<td>8</td>
<td>P</td>
<td>11</td>
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<tr>
<td>SC 13</td>
<td>ANSI(USA)</td>
<td>Powered lawn and garden equipment</td>
<td>18</td>
<td>4</td>
<td>2</td>
<td>P</td>
<td>8</td>
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<tr>
<td>SC 14</td>
<td>ANSI(USA)</td>
<td>Operator controls, operator symbols and other displays, operator manuals</td>
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<td>1</td>
<td>7</td>
<td>P</td>
<td>19</td>
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<td>SC 15</td>
<td>SFS(FIN)</td>
<td>Machinery for forestry</td>
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<td>12</td>
<td>O</td>
<td>10</td>
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<td>SC 17</td>
<td>SIS(SWE)</td>
<td>Manually portable (hand-held) powered lawn and garden equipment and forest machinery</td>
<td>32</td>
<td>6</td>
<td>13</td>
<td>O</td>
<td>8</td>
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<tr>
<td>SC 18</td>
<td>SII(ISR)</td>
<td>Irrigation and drainage equipment and systems</td>
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<td>5</td>
<td>P</td>
<td>6</td>
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<td>SC 19</td>
<td>DIN(DEU)</td>
<td>Agricultural electronics</td>
<td>49</td>
<td>17</td>
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<td>P</td>
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</tbody>
</table>

**Total**: 395 published, 66 under development, 142 KS identification
## 3 Agricultural machinery standards (KS)

<table>
<thead>
<tr>
<th>Standard classification</th>
<th>Terminology standard</th>
<th>(Test) Method standard</th>
<th>Product standard</th>
<th>Total</th>
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<tbody>
<tr>
<td>Tractor</td>
<td>20</td>
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<td>Attachment</td>
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<td>10</td>
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<td>Forestry machinery</td>
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<td>29</td>
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<td>Power tiller</td>
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<td>7</td>
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<td>Cultivator</td>
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<td>1</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Transplanter</td>
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<td></td>
<td>1</td>
<td>2</td>
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<tr>
<td>Combine</td>
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<td>2</td>
<td>2</td>
<td>6</td>
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<td>Seeding machine</td>
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<td></td>
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<td>5</td>
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<tr>
<td>Etc.</td>
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<td>Total</td>
<td>49</td>
<td>79</td>
<td>70</td>
<td>198</td>
</tr>
</tbody>
</table>

- Terminology standard: Terminology, Technology, Unit...
- Method standard: Test/Analysis/Inspection/Measurement/Working... method
- Product standard: Shape/Dimension/Quality ... of Product
3. Agricultural machinery standards (KS)

Unmanned aircraft system standardization work in progress

- National standards (KS)
  - [Published] KS B 7948 (Unmanned aerial spraying systems – General requirements)
  - [Published] KS B 7949 (Unmanned aerial spraying systems – Performance test methods for spraying system)
  - [Published] KS B 7953 (Unmanned aerial spraying systems – Procedure for spraying)
  - [Under development] Unmanned agricultural aircraft systems – Photo shotting procedure for crop situation research

- International standards (KATS proposal)
  - [Under development] ISO/FDIS 23117-1 (Unmanned aerial spraying systems – Part 1: Environmental requirements)
  - [Under development] ISO/CD 23117-2 (Unmanned aerial spraying systems – Part 2: Test methods to assess the horizontal transverse spray deposition)
3 Agricultural machinery standards (KS)

Field operating automation standardization

- [Published] KS B 7951 (Levels of field operating automation of agricultural machinery)
  - Based on ISO/SAE PAS 22736, SAE J 3016
  - Classification from Level 0~5

- [Under development] General requirements for remote controlled agricultural machinery for row-crops
KS Certification

KATS
Generalized certification system

Certification Agency

Certification apply
KS Certification

Follow-up management

KS Certification Factory
Maintaing KS quality

Quality Trust
Saving inspection costs

- Standards → Certification item designation → KS Certification (Not all standards)

- No KS certification item in agricultural machinery
Agricultural machinery certification in Korea

Testing agricultural machinery for approval

- Article 9, Paragraph (1) A manufacturer or an importer of agricultural machinery shall undergo a test for approval of agricultural machinery prescribed by Ordinance of the Ministry of Agriculture, Food and Rural Affairs, such as tractors and combine harvesters for agriculture that he/she manufactures of imports, from the Minister of Agriculture, Food and Rural Affairs.

Approval skip requirement

Tested by accredited test institution in the same method of Korea

Enforcement rules of Agricultural Mechanization Promotion

Ministry of Agriculture, Food and Rural Affairs

Korea Agriculture Technology Promotion Agency
International accreditation

EA: European co-operation for Accreditation
APLAC: Asia Pacific Laboratory Accreditation Cooperation
IAAC: Inter-American Accreditation Cooperation
SADCA: Southern African Accreditation Cooperation
Agricultural machinery network

Ministry of Agriculture, Food and Rural Affairs
Certification

Korean Agency for Technology and Standards
Standard, ISO/IEC

Rural Development Administration
R&D, ANTAM, OECD

KAMICO
Korea Agricultural Machinery Industry Cooperative

LS Mtron daedong TYM
Manufacturing

Test, Certification, R&D
Thank you for listening!