# FINAL EXAMINATION PROJECT
## Documentation

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<tr>
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<th>Michael HEIM</th>
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<tr>
<td>Form</td>
<td>4AFMBM</td>
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<tr>
<td>Academic year</td>
<td>2014/15</td>
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<tr>
<td>Topic</td>
<td>Griller/Smoker for departmental and school events</td>
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<td>Co-operation partners</td>
<td>FOL Peter PONLEITNER</td>
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## Assignment of tasks
Manufacturing of a griller/smoker which can be used both for classic grilling at high temperatures with an open flame as well as for smoking at low temperatures.

## Realization

### Main components of the griller/smoker:
- Cooking chamber
  - airtight lid with integrated thermometers
  - regulation of the air supply by means of a rotating plate in the combustion chamber door
  - optimum heat distribution by means of two separately lockable chimneys
  - hinged cover with grill grate for the food and with fire grate for coals for common barbecue
  - optional mounting of a barbecue spit into a permanently fixed motor for preparation of large cuts of meat
- Combustion chamber
  - heating with wood for smoking meat
## Realization

**Construction:**
- Cooking chamber tightly mounted on the combustion chamber
- Heating of the combustion chamber with wood
- Two interlocking doors on the front:
  - for refilling of combustibles
  - for ash disposal by means of a removable ash pan, running on rails
- Door to air regulation and control of flame height
- Regulation consists of two openings in the door, arranged around a bore
- Covering of the openings by a twistable metal plate
- Above the ash pan an intermediate floor with slots, both for the falling of ash in the ash pan as well as the air flow to the flame
- For heat regulation over the embers two superimposed perforated plates, one of them moveable
- Transport by self-produced cart
- Dimensions of the cooking chamber: dia 600 x 1200 mm
- Weight: ca. 200 kg

## Results

The griller / smoker was constructed entirely by the students with the help of AutoCAD. Then the raw material was ordered. According to the plans and drawings, the material was manufactured, assembled and tested in the workshop.

For this final examination paper, a complete documentation with drawings on design and manufacturing, with spare parts lists and calculations with regard to the steel structure of the griller/smoker was accomplished. Also a cost calculation was carried out. The total cost of the project amounted to € 1,200.
**Illustrative graph, photo (incl. explanation)**

**Griller/Smoker**

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<th>Participation in competitions, awards</th>
<th>None</th>
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<th>Accessibility of diploma thesis</th>
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<th>Approval 20 May 2015</th>
<th>Examiner</th>
<th>Head of Department</th>
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<td>Ing. Gerhard Buchmayr</td>
<td>OSIR DI Günther Hörlesberger</td>
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