




| <b>DK_Copenhagen K_Lynette</b>   |   |   |
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| <b>Image 01:</b><br>Southwest view<br>© Rambøll i Danmark  | <b>Image 02:</b><br>Facade windows<br>© Lynettefællesskabet I/S   | <b>Image 03:</b><br>Skylights<br>© Lynettefællesskabet I/S                          |
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| <b>Building Specifications</b>   |   |   |
| <b>Address</b>   | Refshalevej 250, DK-1432 Copenhagen K, Denmark  |   |
| <b>Building Category</b>   | Industrial  |   |
| <b>Year of Construction</b>  | 2011  |   |
| <b>Special Qualities</b>   | n/a   |   |
| <b>Location</b>  | 56° northern latitude, 13° eastern longitude, located on peninsula. Located in an industrial area surrounded with open water (Øresund) and other industrial buildings |   |
| <b>Climate</b>   | Cfb (warm temperate climate, moist with adequate precipitation in all months and no dry season, warm summer with the warmest month below 22°C)                        |   |
| <b>Vent. Cooling Site Design Elements</b> (Solar Site Design and Wind Exposure Design, Evaporative Effects from Plants or Water)   |   |   |
| n/a  |   |   |
| <b>Vent. Cooling Architectural Design Elements</b> (Form, Morphology, Envelope, Construction &Material)  |   |   |
| <p>The building is a sludge incineration plant, which needs cooling all year round.</p> <p>Morphology: Large hall with sludge burning furnace and boiler inside. The facility is producing heat for the Copenhagen district heating system by burning sludge from the wastewater treatment plant.</p> <p>Envelope: The automatically controlled windows and skylights provide natural cooling. Skylights are arranged in rows at the top and the bottom of the facades.</p> <p>Construction: Heavy mass building</p> |   |   |
| <b>Vent. Cooling Technical Components</b> (Airflow Guiding Components, Airflow Enhancing Components, Passive Cooling Components)   |   |   |
| Windows and skylights are opened by computer controlled devices and temperature sensors, which are placed under the oven hall's ceiling. Upper windows in the façade are usually opened regardless of the season, while the bottom windows are often closed in winter.   |   |   |
| <b>Actuators, Sensors and Control Strategies</b>   |   |   |
| <p>Chain actuators operate façade windows and roof openings</p> <p>Room sensors for temperature</p> <p>Weather station measuring temperature, wind and rain was set on the roof</p>  |   |   |

## IEA EBC Annex 62 Ventilative Cooling

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| <b>Building Energy Systems</b> (Heating, Ventilation, Cooling, Electricity)  |
| The building is heated by surplus heat resulting from the sludge burning process<br>Information about electrical installation is not available                           |
| <b>Building Ownership and Building Facility Management Structures</b>  |
| Lynettefællesskabet owns the building.   |
| <b>Aknowledgements</b>   |
| n/a  |
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