

Improving indoor environment
Βελτιώνοντας το εσωτερικό περιβάλλον

Area of knowledge

- Master in energy systems
- Focus on industrial systems
- Projectwork at Scama
- Thesis at Höganäs AB

Background

- Comfort aspects of ventilation
 - Thermal comfort
 - Air quality
- Energy aspects of ventilation:
 - Heatloss
 - Fans
 - FTX
 - Cooling systems

Goals

- **Provisional thesis title:**

” Utveckling av ventilationsdon för att optimera komfort med minimerad energiåtgång i fastigheter med användare och förvaltare i fokus.”

Methods

- CFD
- LCC
- Measurements:
 - Laboratory
 - On location: before and after
 - Survey
- IDA?

Literature study

- M. Cehlin
- H. Chen
- B. Moshfegh
- Tech. Spec.
- CFD

Repus

- Founded 1976
- New mangement 2010
- Small Company (5 empolyees)
- Quality over quantity
- Unique Technology
- Aims to Expand R&D
- Aims to secure marketshare
- Aims to expand marketshare

Subprojects

- Råcksta
- Sörbyskolan
- Evaluation of Repus softwear

Råcksta – Vällingby parkstad

- Vattenfalls old main office
- 1200 new apartments
- Starts at 2014
- New technology for Repus
- Laboratory evaluation of new technology
- A big deal for Repus?

Råcksta – Vällingby parkstad



Råcksta – Vällingby parkstad





Sörbyskolan

- Renovation starts in september 2015
- Possibility to compare Repus technology with existing ventilation devices
- Measurements
- Surveys
- CFD

Evaluation of Repus Softwear

- Theoretical Models
- Laboratory confirmation
- CFD?
- Improving the model?
- Stepping stone for improving ventilation devices?

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