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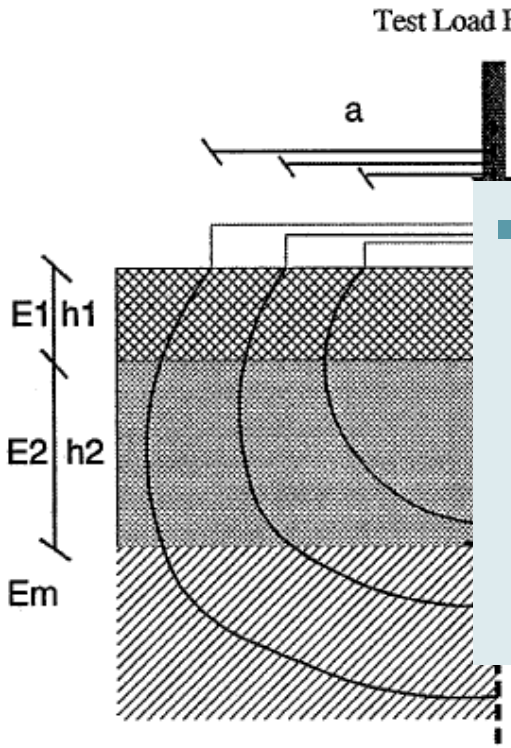
FINAL ASPHALT DESIGN BASED ON MEASURED MODULI OF UNBOUND LAYERS

Susanne Baltzer, Danish Road Directorate
Per Ullidtz, Consultant

Danish Road Directorate

BACKGROUND

PRINCIPLE OF "3-PLATE LOAD TEST"



- From the measured deflections, the moduli of the subgrade, subbase and base course are backcalculated using Odemark-Boussinesq' approach

Jan Jansen,
"Staged Pavement Design",
DRI, Note 256, 1995

NEW PLATE SYSTEM FOR FWD

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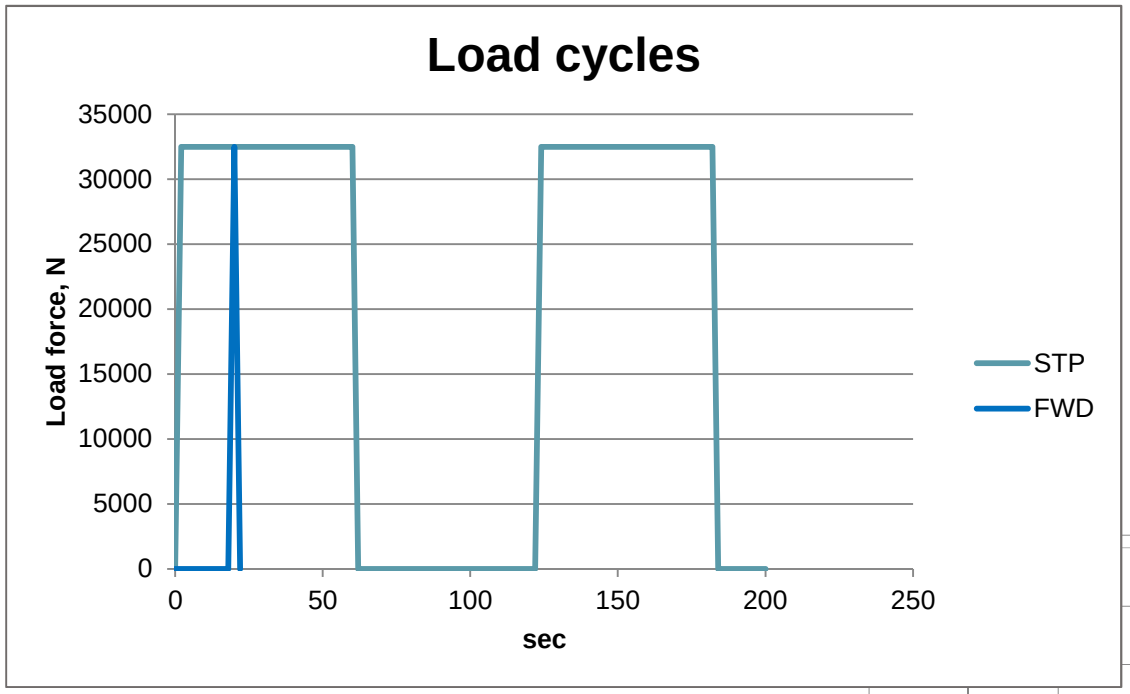
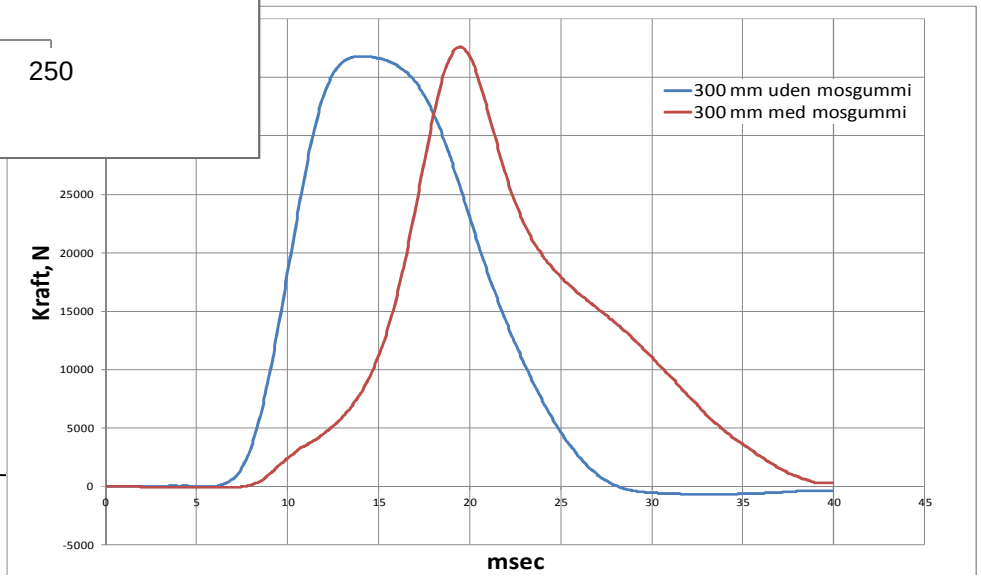
STATIC VERSUS DYNAMIC





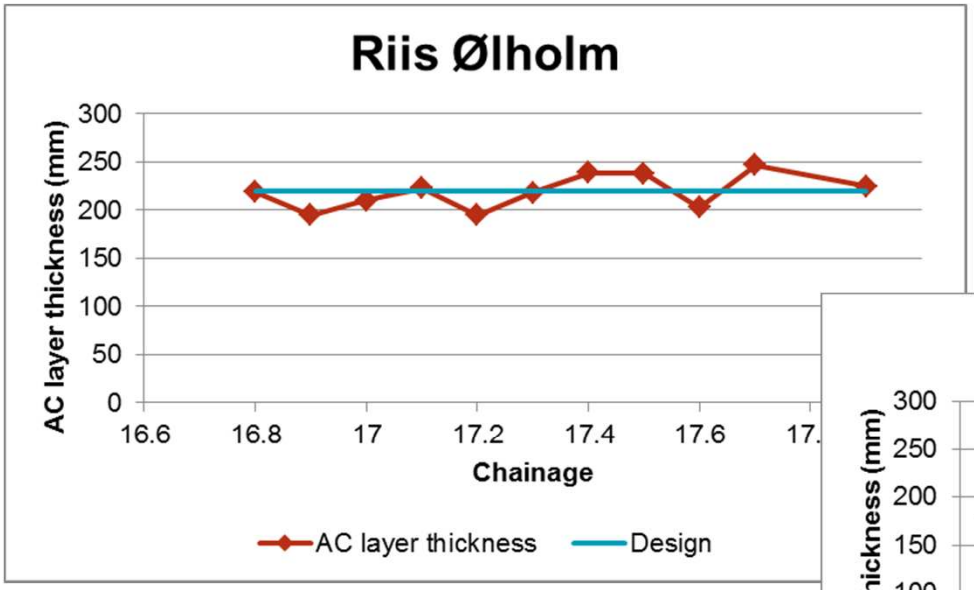
WE FOUND…

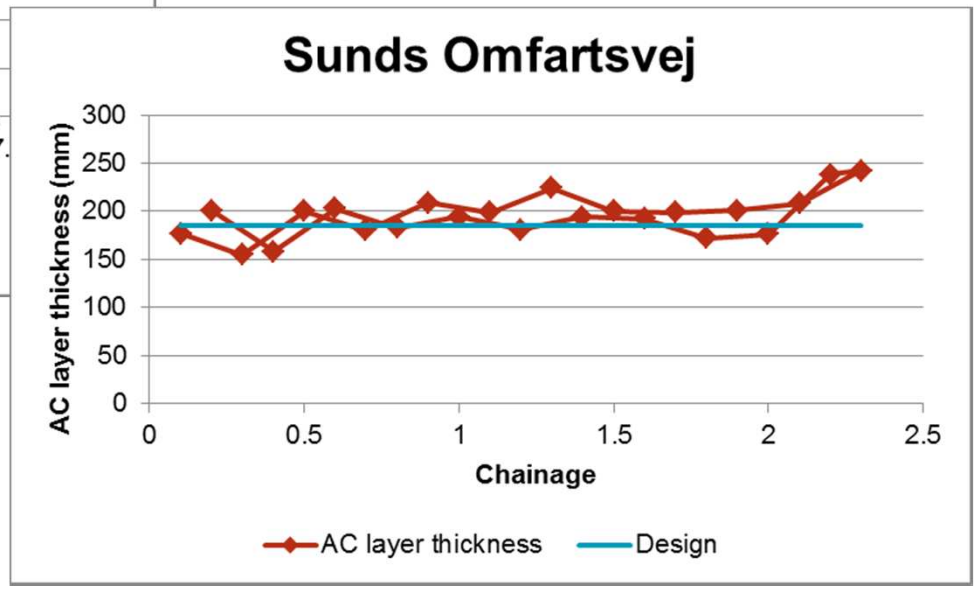
- It was necessary with rubber plate glued to metal plates
- It was necessary with plates/coins on geophone
- We could only make good use of centre geophone

RESULTS AS EXPECTED!

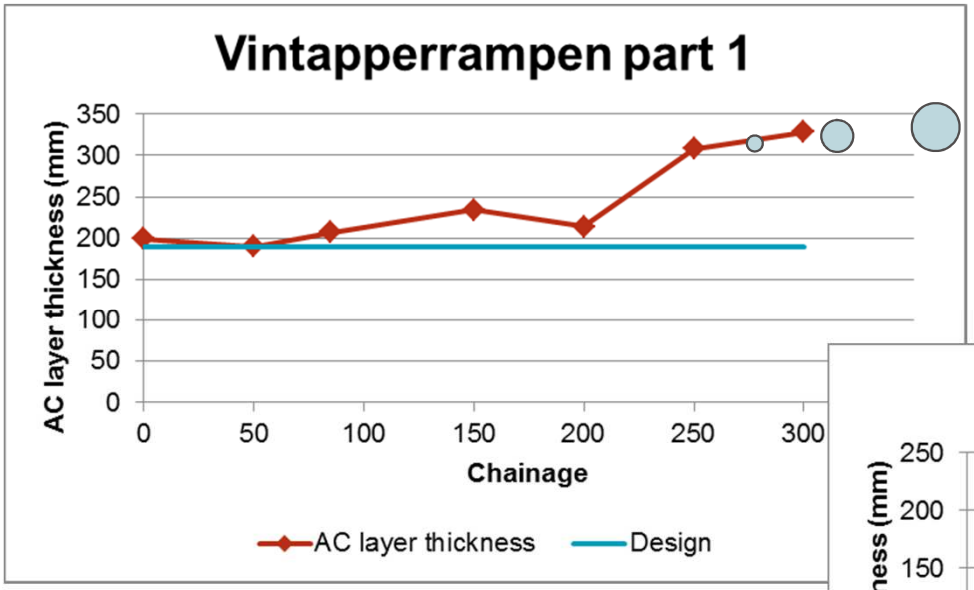
Construction project	E-modulus of granular base course	E-modulus of drainage layer (sand)	Subgrade E-modulus	Number of measure-ments
Riis Ølholm	349	237	48	11
Esbjerg Havn	356	238	30	7
Vintapperrampen part 1	353	245	20	7
Vintapperrampen part 2	280	220	40	6
Sunds Omfartsvej	237	174	42	23
DESIGN	**300**	**100**	**15-50**	

AC LAYER THICKNESS – USING MMOPP

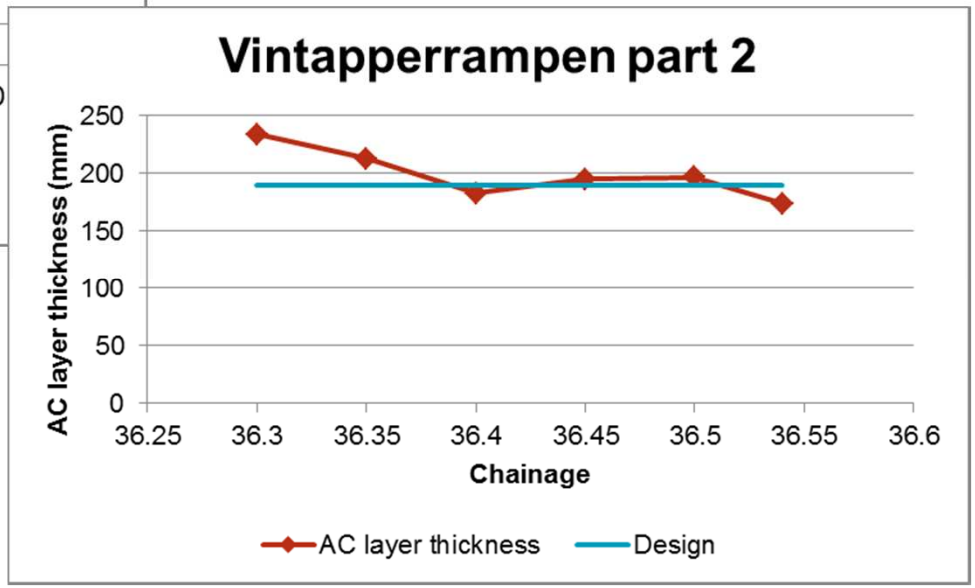




AC LAYER THICKNESS



Limitations?
Frequency of oscillation?



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ADVANTAGES

- Faster method, - we now measure at shorter intervals
  - With Static Plate Load we measured for every 200 m (½ h/point)
  - FWD for every 100 m (10 min/point)
- Better utilization of equipment
- Results seem to match design methodology


Thank you for your attention