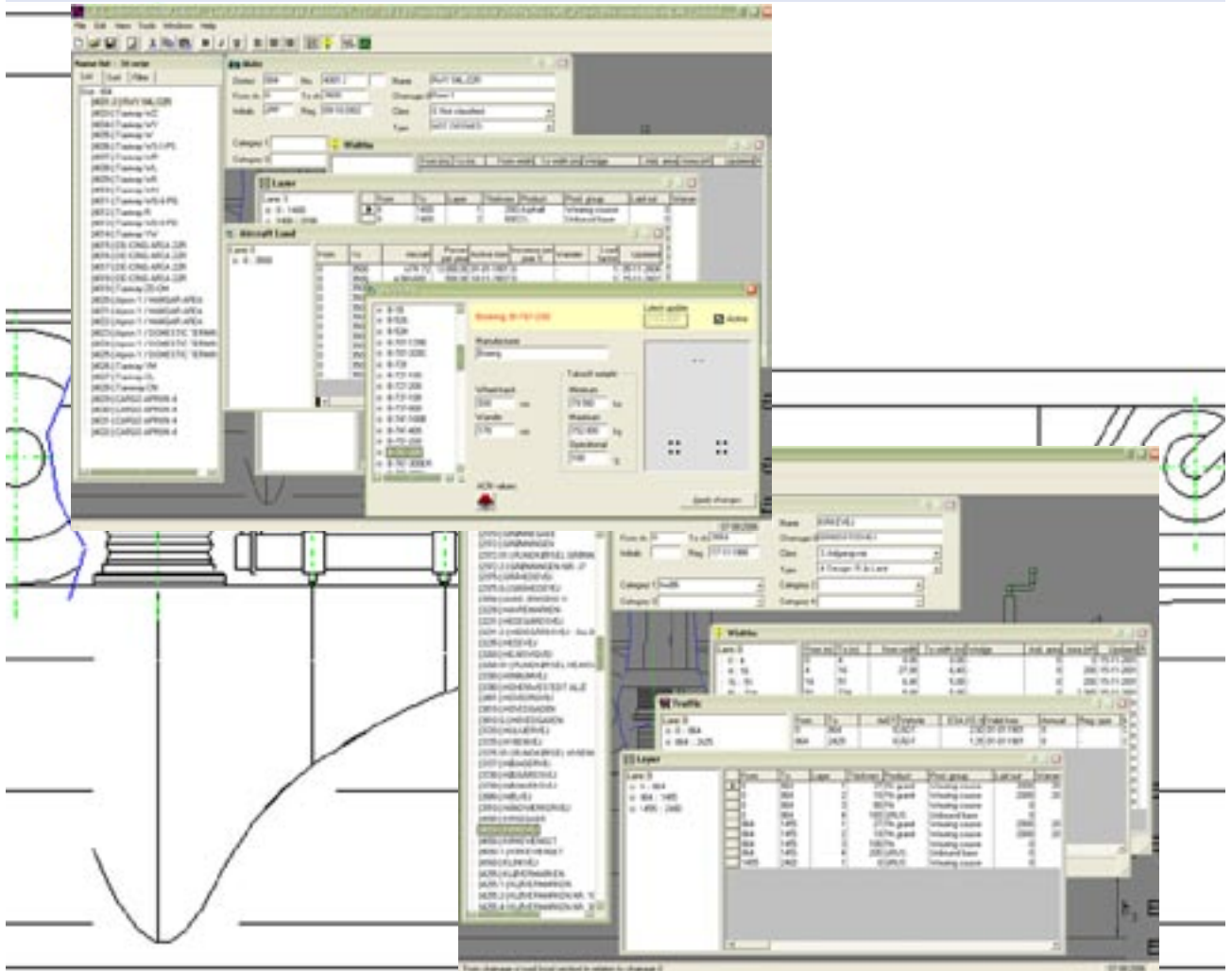


RoSy DESIGN - roads and airports



The Road design programs from Grontmij | Carl Bro are full Windows versions. RoSy DESIGN is supplied as a package containing the required parts from RoSy BASE (Road database) and is available for both road and airport design back-calculation.

RoSy DESIGN - ROADS AND AIRPORTS

RoSy DESIGN for roads

RoSy DESIGN may work fully integrated with RoSy BASE and the design results may be exported to RoSy BASE and used in PMS calculations.

The program processes data from any FWD equipment. The results of the calculation may be printed per measuring point, per section and project with specification of the calculation parameters applied.

RoSy DESIGN for roads

Like RoSy DESIGN for roads, the software for airport can work fully integrated with RoSy BASE.



Based on the calculated field data, PCN values (Pavement Classification Number) are determined for individual pavement sections.



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The systems have been constructed on the basis of the idea of collecting and storing Runway data, road data or bridge data in one place and at the same time organising the data, so that an optimum possibility of data retrieval and import is obtained. Furthermore, the data may form the basis of calculation of advanced short - and long-term maintenance strategies.

RoSy DESIGN is a design program, which makes advanced pavement design and analysis possible.

RoSy DESIGN is part of the modular pavement management system RoSy® PMS.

Airfield data

Based on the calculated field data, PCN values (Pavement Classification Number) are determined for individual pavement sections. To determine whether the existing pavement is capable of carrying a given aircraft, the calculated PCN value is compared to an aircraft's ACN value (Aircraft Classification Number).

Road data

Condition data for roads and bridges (damages, roughness, etc.) and physical data (lengths, widths, etc.) are stored in files in RoSy BASE and RoSy BMS databases. A design part (RoSy DESIGN) makes an advanced design of the road pavement possible, while the calculation part (RoSy PLAN) is applied for calculation of maintenance options.

RoSy PMS/BMS is a modular system, which is normally supplied with a data base module, which may be extended as required

Back-calculation method

The RoSy Design program uses a back calculation method. The calculation of the deflection of a pavement surface is based on the theory of elasticity and the method of equivalent thickness, as framed by J. M. Kirk and N. Odemark on the basis of Boussinesq's equations.

Calculation of reinforcement is based on fatigue relations and the stresses and strains caused by the actual traffic for which calculation of necessary overlay is required.

For aircraft loads the areas, on which overlap is found, the equivalent factors are found by calculation of the fatigue caused by the individual aircraft in correlation to the fatigue caused by the Design Aircraft.

For further information please visit our website or contact:

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