



## INSPECTIONS REPORT

Datum  
98-05-06

Sida  
1(3)

Plant

SAQ customer

Place - Address

SIT DOWN EXPORT AB  
Kuggstångsgatan 3

Name of manufacturer

721 38 Västerås

SIT DOWN

Type

Customers reference

SAQ reference

Lars Jonsson

Arne Westerholm

Manufacture no

Date of manufacture

Order no

SAQ commission no

672055-00

Name of object

SAQ register no

Platformsection

Other

Commission

**Loadtesting of platform according to Eurocode.**

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### Summary:

I was requested by Mr Lars Jonsson SIT DOWN EXPORT AB to attend at some loadtests of abovestanding platform. The platform size was 2 \* 1 m and the height of it's legs was 2,6 m.

The tests we made were done according to regulations in Eurocode and DIN. The main purpose with our testing was to establish a safeworking load for the equipment.

### Description:

To test the platform with both horizontal and vertical loads and find out if there was any problems in the construction.

### Checked points:

Platforms with the same type and same height of legs and without any barriers.

### Prescriptions and standards in use:

ENV 1991-1:1994 , ENV 1991-2-1:1995 and DIN 4112 4.2.1.2

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### **Presumptions:**

Platform: Edge profile SDE 140.53 mtrl Al.SS 4107-06  
Corner profile SDE 140.54 mtrl Al. SS 4107-06  
Legs and top same as for old platform.  
Stayings horizontal and diagonal on the short sides square profile 40\*40\*2 mtrl Al.SS 4104-06.  
Stayings diagonal on the long sides rectangular profiles 60\*40\*2 mtrl Al.SS 4104-06.

### **Method:**

Using three loadingstools when bringing load to the surface of platform. The stools had a rectangular area of 1,2\*0,8 squaremeters each and were centered at the platform.  
The horizontal load, which was 10% of vertical load, was placed at the top of two legs on the short side and was weighed up with a balance. (See enclosed photos.)  
Maximum load vertically was 23kN and horizontally 2,3kN.  
These loads includes a safetyfactor of 1,5.

### **Result:**

Three loadtests including all the equipment were done and one single test on the platform excluding legs and stayings etc.  
The tests we made showed no weakness in the platform itself but in the legs, if the stayings not are mounted in a proper way.  
Two of the loadtests failed because of incorrect mounting of diagonal stayings. The stayings should be mounted as close as possible to the top and bottom of the legs to achieve necessary stability in horizontal direction.  
The third test with maximum load was a success and after unloading we couldn't find any deformations at all on any part in the konstruktion.  
Finally we tested the new design of platform to see how much load it could take without breaking apart. We stopped after loading 4300 kg on it and found a slight remaining deformation after unloading.

### **Comments:**

Refering to the results of the loadtestings we made it's obvious that the platforms can stand a safeworking load of 7500 N/squaremeter in vertical direction and 10% of vertical load in horizontal direction.  
The new design of platform itself excluding legs, stayings etc, can without problems carry 12500 N/squaremeter in vertical direction. No tests were done to it in horizontal direction.

### **Divergences:**

No divergences found.



**Remaining:**

I have not checked any calculations or other documents of importance. My assignment was to attend at the testings to make it in a proper way.

Instructions and drawings including calculations etc should be delivered by the manufacturer .

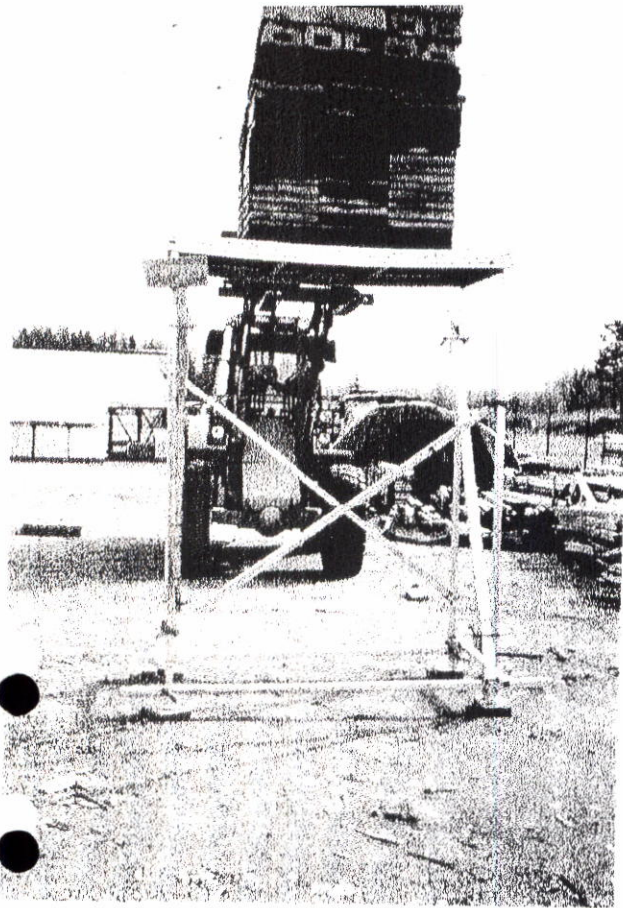
The instructions are necessary to get a safe and proper mounting in situ.

Number of enclosures: 6

Best regards

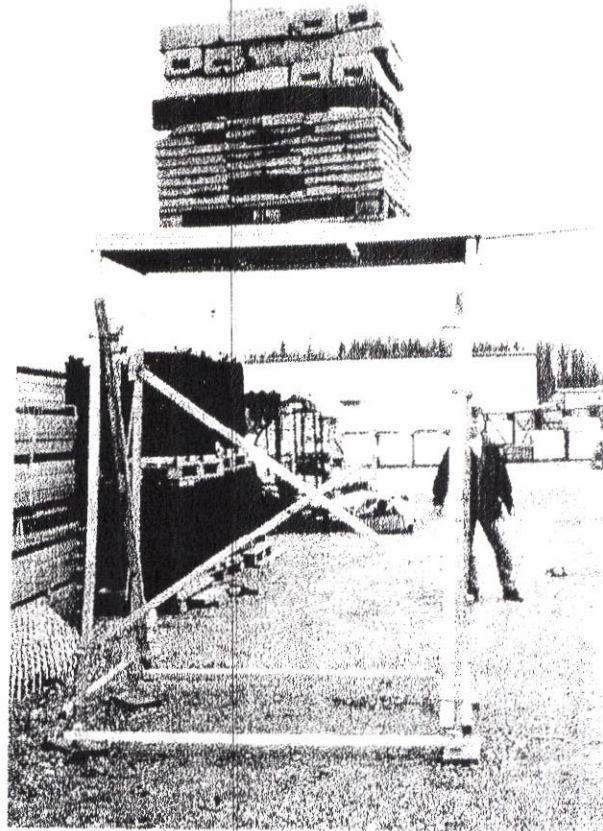
Arne Westerholm  
Inspection Engineer





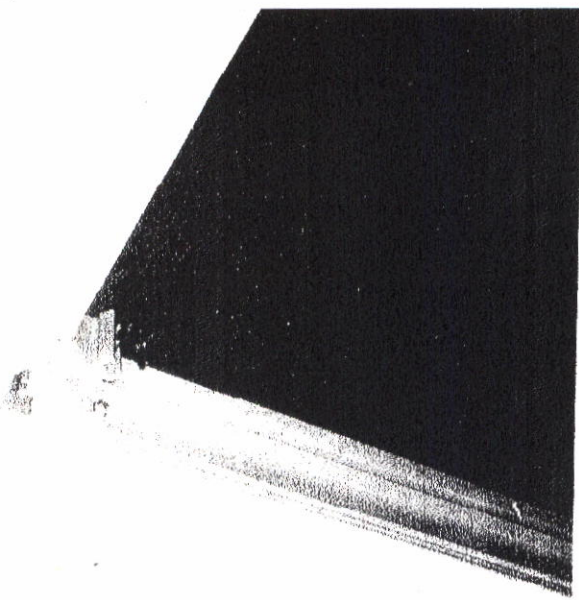
Left picture

Maximum vertical load 2380 kg.  
No horizontal load.



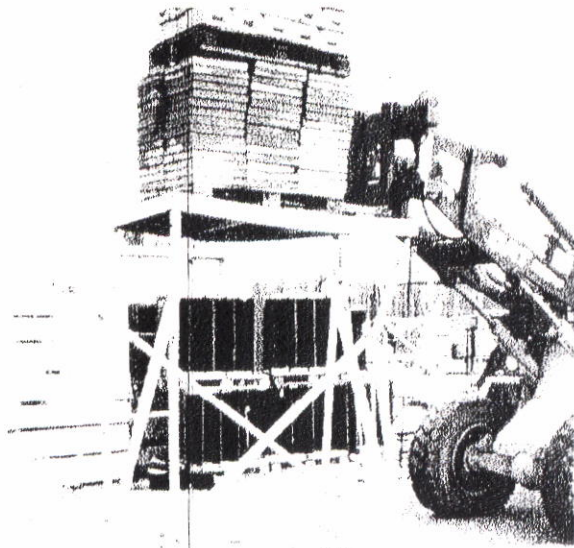
Right picture

Vertical load 1500kg and beginning horizontal  
loading.



Left picture

Platform seen from underneath after collapsing



Right picture

Platform just before collapsing