

EVALUATION OF ROOF COLLAPSE BEHAVIOR OF PIPE-FRAMED GREENHOUSES UNDER SNOW LOAD AND THE SNOW LOAD CARRYING CAPACITY OF THE STRENGTHEN FRAMES

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Keywords: *pipe-framed greenhouses, snow load carrying capacity, strengthen frames*

ABSTRACT

The purpose of this study is to investigate the collapse behavior of pipe-framed greenhouses (Fig.1,2,3) subjected to snow load and the snow resistance performance of the strengthen frame (Fig.6). The snow load distributions (Fig.4,6) for a structural safety design of pipe houses are proposed based on field observations in a mountain (Fig.6). The experiments (Fig.5) of a pipe house subjected to sand bags are carried out to investigate the deformation and the load-carrying capacity.

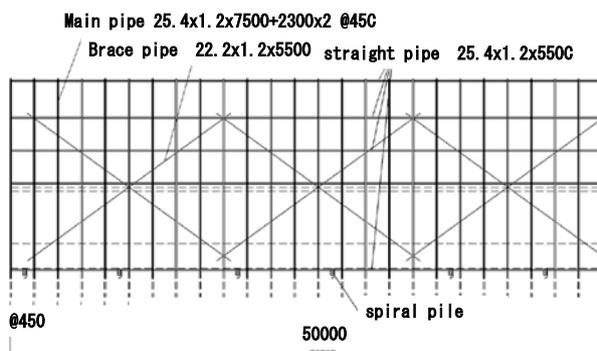


Fig. 1. Elevation of greenhouse (Unit: mm)

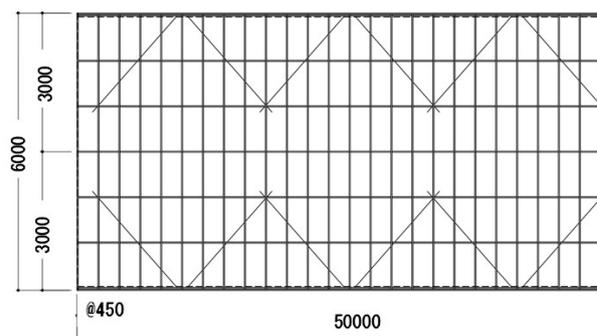


Fig.2. Plan of greenhouse (Unit: mm)



Fig. 3. Isometric drawing

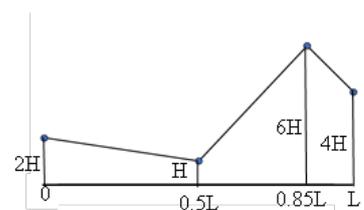


Fig.4. Proposed design snow load distribution

