

ABSTRACT

SYNCHRONIZATION OF SPREADER TWIST-LOCKS IN TWIN LIFT OPERATIONS

The invention relates to a spreader comprising inner (2) and outer (3) locking means connectable to the corner castings of a single container and optionally to two containers connectable in twin relation to the spreader, the outer locking means (3) carried in pairs in the ends, respectively, of extendable beams (4,5) telescopically supported in a main beam (6), and the inner locking means (2) movable in pairs on the main beam exterior, wherein, in each set ($2^1, 3^1$; $2^2, 3^2$) of associated pairs of inner and outer locking means, the pair of inner locking means (21; 22) is operable for displacement in the length direction of the spreader through a second drive means (7) which is separate from a first drive means (8) that is operative for displacement of the outer locking means (3^1 ; 3^2) through extension/retraction of the extendable beam (4; 5). According to the invention, the first and second drive means are individually powered and separately operated through a control system that synchronizes the concurrent displacements of the outer and inner locking means without a mechanical connection being arranged between associated pairs of outer and inner locking means in extension/retraction movements. In accordance herewith, the invention also advises a method for synchronizing the concurrent displacements of associated outer and inner locking means in longitudinal directions of a spreader designed for single and twin lift operations, comprising the steps of feeding power individually to separate first and second drive means that are operative for displacement of the outer and inner locking means, respectively, and controlling the power supplies to the first and second drive means for synchronized displacements without connecting mechanically the associated outer and inner locking means.

Fig. 1