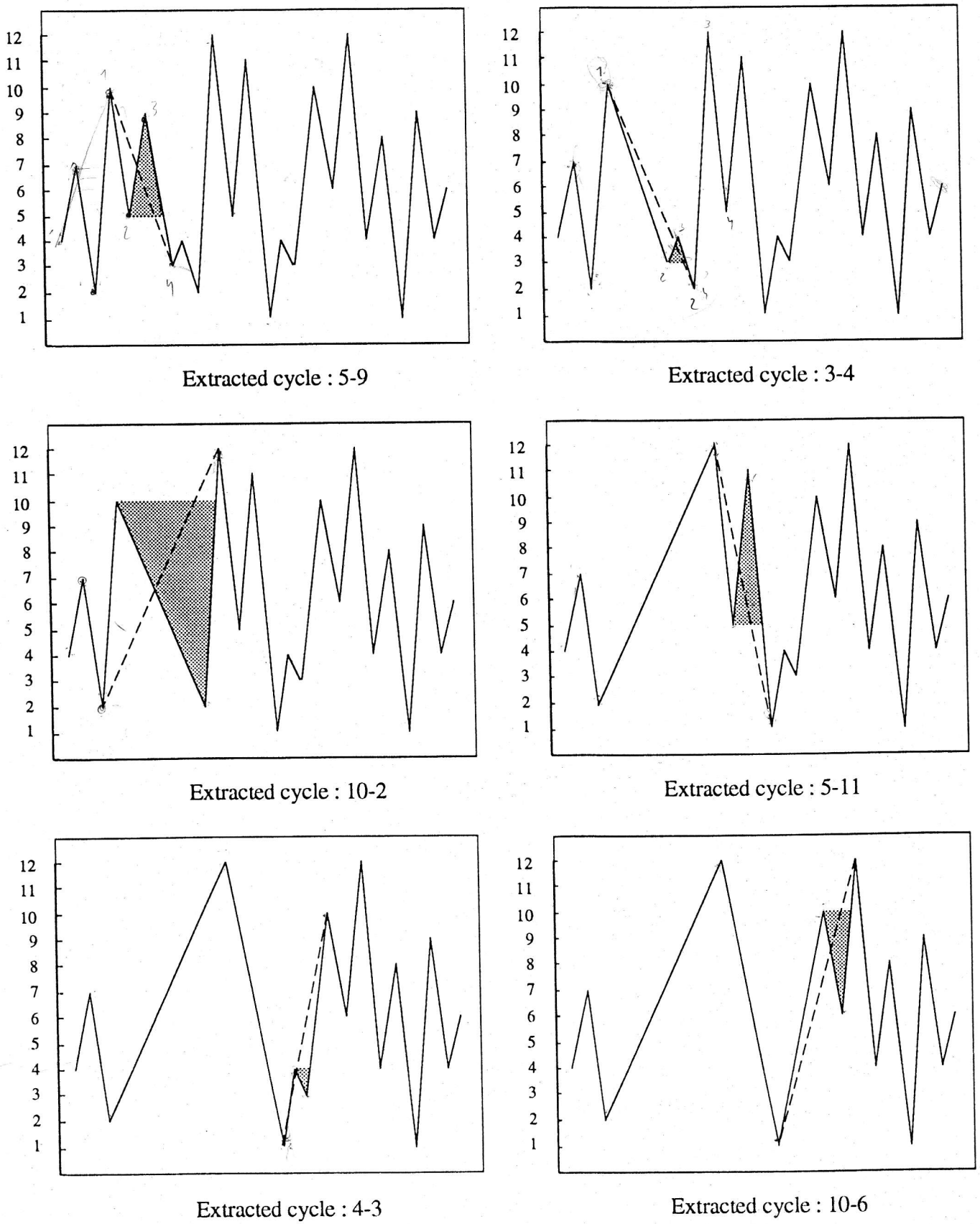

Figure 3 Application of the proposed rainflow method.

truncated (cycles with amplitudes respectively below or above a chosen threshold).

The procedure for reconstruction is exactly the reverse of that for cycles extraction. A cycle is inserted into the sequence in agreement with the rule that its transitions must be entirely included in the transition where the cycle is inserted. It is also possible to respect the circumstances of the occurrence of the cycle (S_i,S_j), as described in *Figure 4*: (1) if $S_i > S_j$, the cycle appeared in an increasing transition and thus will be inserted in a transition of similar slope; (2) if $S_i < S_j$, the cycle appeared in a decreasing transition.