Summary: Let \( C \) be a given circuit of a bridgeless cubic graph \( G \). It was conjectured by Seymour that \( G \) has a circuit double cover (CDC) containing the given circuit \( C \). This conjecture (strong CDC [SCDC] conjecture) has been verified by H. Fleischner and R. Häggkvist [Discrete Math. 309, No. 18, 5724–5728 (2009; Zbl 1218.05129)] for various families of graphs and circuits. In this article, some of these earlier results have been improved: (1) if \( H = G - C \) contains a Hamilton path or a \( Y \)-tree of order less than 14, then \( G \) has a CDC containing \( C \); (2) if \( H = G - C \) is connected and \( |V(H)| \leq 6 \), then \( G \) has a CDC containing \( C \).

Keywords: strong circuit double cover; Hamilton path; \( Y \)-tree