A \{1, 2\}-matching \(M\) of a graph \(G\) is a collection of edges such that each vertex of \(G\) meets at most two edges of \(M\). A perfect 2-matching of \(G\) is a \{1, 2\}-matching that is a spanning set consisting of pairwise vertex disjoint edges and odd cycles. For a subset of vertices \(X\), \(N(X)\) is the set of vertices of \(G\) adjacent to at least one vertex in \(X\). A theorem of Tutte asserts that a graph \(G\) has a perfect 2-matching if and only if \(|N(X)| \geq |X|\) for all independent sets of vertices \(X\). We investigate minimal 2-matching covered graphs, i.e. graphs in which every edge is in some perfect 2-matching and the removal of any edge results in a graph without this property. In particular, we will discuss some classes of minimally 2-matching covered loopy graphs (graphs in which each vertex may contain a loop), where a loop is regarded as a cycle of length one. (Received September 19, 2011)