1079-11-64 **Alessandro Cobbe*** (a.cobbe@sns.it), Scuola Normale Superiore, piazza dei Cavalieri 7, 56126 Pisa, Italy, and **Luca Caputo** (luca.caputo@unilim.fr), Facultée de Sciences et Techniques, 123 Avenue Albert Thomas, 87060 Limoges, France. *An explicit candidate for the set of Steinitz classes of tame Galois extensions with fixed Galois group of odd order.*

Given a finite group G and a number field k, a well-known conjecture asserts that the set $\mathrm{R}_t(k,G)$ of Steinitz classes of tame G-Galois extensions of k is a subgroup of the ideal class group of k. In this paper we investigate an explicit candidate for $\mathrm{R}_t(k,G)$, when G is of *odd* order. More precisely, we define a subgroup $\mathcal{W}(k,G)$ of the class group of k and we prove that $\mathrm{R}_t(k,G) \subseteq \mathcal{W}(k,G)$. We show that equality holds for all groups of odd order for which a description of $\mathrm{R}_t(k,G)$ is known so far. Furthermore, by refining techniques introduced in [**?**], we use the Shafarevich-Weil Theorem in cohomological class field theory, to construct some tame Galois extensions with given Steinitz class. In particular, this allows us to prove the equality $\mathrm{R}_t(k,G) = \mathcal{W}(k,G)$ when G is a group of order dividing ℓ^4, where ℓ is an odd prime. (Received December 14, 2011)