In this paper, oxidative leaching and electrowinning processes were performed to recovery of mercury from spent tubular fluorescent lamps. Hypochlorite was found to be effectively used for the leaching of mercury to the solution. Mercury could be leached with an efficiency of 96% using 0.5 M/0.2 M NaOCl/NaCl reagents at 50 °C and pH 7.5 for 2-h. Electrowinning process was conducted on the filtered leaching solutions and over the 81% of mercury was recovered at the graphite electrode using citric acid as a reducing agent. The optimal process conditions were observed as a 6 A current intensity, 30 g/L of reducing agent concentration, 120 min. electrolysis time and pH of 7 at the room temperature. It was found that current intensity and citric acid amount had positive effect for mercury reduction. Recovery of mercury in its elemental form was confirmed by SEM/EDX. Oxidative leaching with NaOCl/NaCl reagent was followed by electrowinning process can be effectively used for the recovery of mercury from spent fluorescent lamps.