Cross-sectional descriptive study of health status, blood manganese level (Mn-B level) and neurologic examination were undertaken in 39 welders and 135 mechanics who worked in confined space. Mn-B level was determined by using the atomic absorption spectrophotometer at the Public Health Institute's Laboratory,Mahidol University. Our results indicated Mn-B level in the welders was not significantly higher than that in the machanics ($p > 0.05$).

The average Mn-B level in the welders was 2.95 µgm% (0.29-12.50) and in the machanics was 2.51 µgm% (0.45-9.34). The average Mn-B level in welders exposed to manganese fume for more than ten years significantly differed from the level for shorter exposure intervals ($p < 0.05$). The average Mn-B level in the welders who smoked,drank alcohol or used respiratory protection was not significantly higher than in those who without such factors. The average Mn-B level in machanics with these factors was not significantly higher than in those without ($p > 0.05$). Neurological examination revealed 13 cases out of 128 cases with abnormal finger-nose test, 12 cases (9.37 %)of whom were in the group with Mn-B level below 4 µgm% ($p > 0.05$).

Our results suggest that for manganese intoxication the Mn-B level and neurological examination should be used in the case of workers under confined space.