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In the present research, the evaluation of environmental friendly machinability on duplex stainless steel 2205 under different types of environmental friendly machining e.g. dry machining, MQL machining, LCO_2 machining, and hybrid MQL-LCO_2. The present research work is divided into three segments. The major conclusions of the work have been summarized in this chapter and the scope for future work have been identified. The conclusion drawn from the study conducted in each of the segments are given below:

6.1 General Conclusions

(A) Experimental investigation under dry and wet conditions has led to the following conclusions

- In this section parametric optimization through the Taguchi method under dry and wet conditions with input parameters e.g. machining environment, spindle speed, and feed rate while surface roughness is the response variable.
- After experimental investigation It was noticed that the best choice of optimum process parameters e.g. wet machining, high spindle speed (900RPM), and low feed rate 0.03 mm/rev which gives0.748 micron minimum surface roughness (Ra).
- After the analysis of the response table, it was observed that the most effective parameter is the machining condition compared to spindle speed and feed rate.
- The confirmation test was carried out for comparison of the experimental value to the predicted value and after the confirmation test, it was observed that the experimental value was nearest to predicated value with 0.32% to 1.56 % error.