

Summary

This project focuses on the transfer point renovation topic in one dry bulk terminal. As in reality a lot of manufacturers take great efforts in offering better transfer point solution, less academic research has been done especially for the transfer point itself. This makes transfer points a quite interesting topic for me. And the Kleinpolder plein which is one of the transfer points in EMO dry bulk terminal plays the key role in being the case study object. Although the research and design is done for the Kleinpolder plein, the methodology used and the designs developed in the project can be applied to other transfer points once adaption has been made.

The thesis paper begins with a general introduction on the reason of applying transfer points in dry bulk terminal. Then it is understood that the transfer point is an inevitable components for a terminal. Followed by that, a series of common problems in transfer points will be illustrated. Those general analyses can be applied to any transfer points.

The second part narrows the general introduction to exclusive focus on Kleinpolder plein. Based on the material – equipment – environment interaction relation study, the current situation for the target transfer point is known by now. With that information regarding performance of Kleinpolder plein, problems such as spillage, more energy consumption in transfer point are put on the table. And at the same time, key performance indicators are development especially under the circumstance what Kleinpolder plein is suffering from.

With the research result, design is made on the guideline of eliminating or at least improving the current problems in transfer point. Two main design directions: one is the technical design and the other is the operational design. The technical design mainly deals with the problems that can be solved by mechanical changes in the equipment or facility. And the operational design on the other hand offers a solution that reduces the function of transfer points. However, single design is not able to help forming a complete project which can help with EMO. Therefore, scenarios have been developed on the purpose of forming a complete new system, with which several improvements can be made in one adaption. The evaluation is followed by the scenario development. Matrix multiply is a core evaluation tool in this project. With the help of matrix, the connection between departments' subject preferences and the scenario evaluation is built. In the end, two scenarios are much preferred. Based on five key performance indicators, their performances are again under evaluation. As a result, decision could be made by people from EMO freely based on their priority.

And the final part gives conclusion and recommendations with this project. Besides the recommendations given especially to EMO, suggestions regarding general transfer point renovation are also offered. Instead of just solving problems for one specific transfer point, the project is trying to conclude a complete system that can help with all transfer points in dry bulk terminals.