



Fig. 13. Examples.

shows the evaluation results from 22 respondents. The average scores are 6.9, 7.3, 6.6 and 7.0, respectively. This result shows that the generated examples are highly evaluated.

5. Conclusion

The examples show that the landscapes of processing plants are satisfactorily represented, while some detailed parts, such as valves, steps, and branching pipelines, are

not generated.

The method does not consider collisions of pipelines and other objects, either. Therefore, some pipelines penetrate tanks and processing columns. In general, a collision-detection process is a time-consuming one; therefore we have to design an effective way to avoid collision in the piping process.

From a practical application standpoint, it is necessary