Pengembangan metode orientasi pada simulator pengelasan untuk pelatihan las dengan augmented reality = Development of orientation method in welding simulator for welding training with augmented reality

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Abstrak

[ABSTRAK
Pengelasan, merupakan salah satu skill yang sulit dikuasai dan mahal untuk pelatihannya. Dalam pelatihan untuk melakukan welding, waktu beserta material yang terbuang tidaklah sedikit. Selain itu proses analisis dari welding yang telah dilakukan tidaklah sebentar, butuh orang yang berpengalaman untuk menilai apakah suatu pengelasan yang dilakukan saat pelatihan sudah bisa dikatakan bagus. Karena itu simulator pengelasan berbasis augmented reality sudah mulai digunakan dalam pelatihan pengelasan. Dalam pembuatan suatu welding simulator, banyak bagian-bagian yang harus dibuat sehingga dapat menjadi suatu aplikasi simulator yang bisa digunakan. Orientasi atau sudut pengelasan merupakan bagian dari variabel yang akan mempengaruhi suatu hasil pengelasan. Karena itu penulis mengembangkan suatu metode untuk mencari perhitungan sudut orientasi welding torch sehingga dapat digunakan sebagai bagian dari welding simulator.
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ABSTRACT
Welding, is one of skill that is difficult to be mastered and also cost a high amount of money in the training process. In the training process usually the time and the material that has been wasted can be considered many. And then an experienced person is needed to analyze the welding results. Because of that a semi-automatized training needs to be created. So welding simulator with augmented reality has been used in modern country to make the welding training more efficient. To meake a welding simulator, many components need to be developed or made, before it can be used for the actual training of welding. In welding there are so many factors that can affect the welding results. One of them is the orientation angle between plate and torch. Welding results can be very affected by the orientation of the torch and plate. Because of that we develop a method to find an angle between plate and welding torch so then it can be used as a part of the welding simulator., Welding, is one of skill that is difficult to be mastered and also cost a high amount of money in the training process. In the training process usually the time and the material that has been wasted can be considered many. And then an experienced person is needed to analyze the welding results. Because of that a semi-automatized training needs to be created. So welding simulator with augmented reality has been used in modern country to make the welding training more efficient. To meake a welding simulator, many components need to be developed or made, before it can be used for the actual training of welding. In welding there are so many factors that can affect the welding results. One of them is the orientation angle between plate and torch. Welding results can be very affected by the orientation of the torch and plate. Because of that we develop a method to find an angle between plate and welding torch so then it can be used as a part of the welding simulator.]