

**METHOD OF PROVIDING CLASSIFICATION INFORMATION ON IRON
SCRAPS ACCORDING TO UNLOADING PROCESS AND IRON SCRAP
CLASSIFICATION APPARATUS**

ABSTRACT

A method of providing classification information for iron scraps includes receiving, by a receiving circuit, a loaded state image during an unloading process of multiple iron scraps loaded onto a loading device, and, by a processor, obtaining layer information that is updated as the unloading process progresses and determined based on a height of the multiple iron scraps determined in a stack direction of the multiple iron scraps, determining a region of interest based on the loaded state image that is updated as the unloading process progresses, generating a segmented image of a target iron scrap, included in the region of interest, generating item information and grade information for the target iron scrap based on the segmented image and the layer information, and providing classification information for the iron scraps, including the item information and the grade information. The target iron scrap is one of the multiple iron scraps.

FIG. 2