SAFE USAGE INSTRUCTIONS

INSTALLED JOULE RETARDERS

1. DOCUMENTS

1.1 It is critical to note that each separate joule retarder, speed control system, spring frog tester or other assembly/item is subject to the correct principles of operation, installation, application and utilisation as contained elsewhere on this website.

1.2 It is further critical to note that, before the use of, installation and/or application of any of the items produced or supplied by the Company, that the disclaimer on the website and the documents, also on the website, in support of such individual items, require to be read and understood clearly.

1.3 The designed products each have specific and individual uses, and are subject to differing specifications and tolerances, and must be utilised within the parameters stipulated by the installation manual, and subject to the working conditions and usage parameters as contained therein. Irrespective as to the generality of the aforegoing however, the disclaimer contained elsewhere on this website takes precedence.

2. SAFE WORKING PRACTICES

2.1 Apart from the generally accepted safe working practices utilised internationally in railyards, railroads and industrial premises, attention is drawn to the precautions contained in the documents on the website, including the installation

of piston retarders, their proper usage, and the general conduct required when in the proximity of operational retarders and similar equipment. Care must be taken that the documents relevant to the application and which are contained on the website under the heading “documents” are downloaded, perused and understood in the installation and application of the items, specifically prior to usage.

3. PROXIMITY

3.1 The purpose of piston retarders is to assist in the creation of a constant speed control throughout a classification yard, and to assist in the provision of controlled impact couplings in the classification tracks. The design and purpose of the “Joule” retarders is to create the circumstance that the cars will be able to travel at a constant speed between switches. These retarders are self-contained and do not require external controls for operation. On such basis and as a result thereof there is no control over the proximity within which employees, contractors, sub-contractors and other parties (hereinafter referred to as parties) approach the items in question. As a general rule, and subject to any specific direction contained in the documents, all parties should, at all times, stay a safe and cautious distance away from the track during the movement of cars over installed and functional piston retarders, whether in hump mode or when trimming cars. It is further a critical feature that all parties are carefully warned to stay out of the proximity of a moving train or rail car or in the proximity of an operational and working retarder, irrespective as to the use to which it is being put.

3.2 Proximity to a retarder, in itself, is not dangerous, however due to the risk of any form of mechanical failure, impact or damage, including but not limited to the possibility of derailment or other catastrophic circumstance, dictates that all parties must remain a safe distance away from any moving carriage/car/engine, whether in hump mode or when trimming cars.

4. DERAILMENT

4.1 During the passage of wagons/cars/engines through marshalling yards and in controlled or restricted areas, it is necessary to control speed accurately to increase throughput and reduce damage to rolling stock and freight. Speed control is accordingly the only means by which optimum operation can be achieved. The products are utilised to achieve efficiency having regard to the modern day demands of high speed marshalling yards, and are those offered by the Company, utilising hydraulically operated devices installed alongside the track, and which are activated at predetermined speeds and within set parameters.

4.2 Having regard to the nature, design and implementation of the retarders, there is a minimal but possible risk of derailment, specifically if the safety parameters, installation instructions, maintenance or utilisation of the retarder is not adherent to or within the parameters contained in the stipulated documentation and/or installation and service guides as well as the maintenance guides provided.

4.3 Accordingly, all parties should stay a safe distance away from the track at all times during any movement of cars of whatsoever nature or engines, over installed piston retarders, whether in hump mode or when trimming cars.

4.4 Furthermore, pull-out, pullover, pullback and trimming speeds over retarders should be below the set speed (speed setting) of the installed hydraulic piston retarders. The set speed is stipulated in the documents in respect of the retarder in question, and any non-adherence to the set speed will increase or enhance the risk of damage, injury or possible derailment.

5. WORKING DIRECTIVES

5.1 All marshalling yard personnel, or any other party whatsoever involved with the retarders, or the movement of trains over the hydraulic piston retarders, should ensure that they contact their signal department to obtain safe working directives, safe pullover speeds stipulated by said signal department and operating precautions prior to entering retarder zones, either to preform work on the installed piston retarders, or moving trains over installed piston retarders, or for any other reason whatsoever.

5.2 The documents supplied on the website contain specific critical information in relation to installation, maintenance, utilisation and the basic principles as contained therein and must be read and understood.

5.3 It must be noted that the control of speed is achieved by the principle of extracting energy from the railcar as it rolls over the retarder, which is a displacement of

energy, and which can, due to the laws of physics, under extreme circumstances, cause derailment or other damage. Accordingly, all safety standards must be strictly adhered to, and specifically safe distances must be maintained in respect of any moving car when the retarder/s is/are in operation.

6. DISCLAIMER

6.1 The disclaimer which is contained in the website must be read and understood carefully, as it is applicable to the installation and use of retarders without exception. Whilst safety is of paramount importance, it is beyond the control of the Company to monitor and/or control the installation, use or operation of the retarders and such responsibility passes to the Client immediately after installation is complete.