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**(54) Title (EN):** HORIZONTAL SUPPORT FORCE REINFORCEMENT AND CONTROL SYSTEM OF GUARDRAIL INSTALLED ON SLOPE, HORIZONTAL SUPPORT FORCE REINFORCEMENT AND CONTROL STRUCTURE OF GUARDRAIL INSTALLED ON SLOPE, AND GUARDRAIL INSTALLATION METHOD USING SAME

**(54) Title (FR):** SYSTÈME DE RENFORCEMENT ET DE COMMANDE DE FORCE DE SUPPORT HORIZONTALE DE GLISSIÈRE DE SÉCURITÉ INSTALLÉE SUR UNE PENTE, STRUCTURE DE RENFORCEMENT ET DE COMMANDE DE FORCE DE SUPPORT HORIZONTALE DE GLISSIÈRE DE SÉCURITÉ INSTALLÉE SUR UNE PENTE ET PROCÉDÉ D'INSTALLATION DE GLISSIÈRE DE SÉCURITÉ LES UTILISANT

**(54) Title (KO):** 비탈면에 설치된 가드레일의 수평지지력 보강 · 제어시스템 및 비탈면에 설치된 가드레일의 수평지지력 보강 · 제어 구조 및 이를 이용한 가드레일 설치공법

**(57) Abstract:**

**(EN):** The present invention reinforces, with a horizontal support force reinforcement structure, a shortage of a horizontal support force of a guardrail pillar caused by a "guardrail installation width at a banking section of a slope" being typically formed narrower than a prescribed tolerance, and at the same time allows an impact load to be absorbed by the horizontal support force reinforcement structure and allows absorption due to bending deformation to precede absorption due to reaction, thereby preventing risk to life due to an initial impact reaction force, as well as significantly reducing the magnitude of the reaction force due to the reaction, which is a main cause of subsequent primary and secondary accidents. In addition, the present invention has a simple horizontal support force reinforcement structure, which makes it easy to repair and newly install a guardrail, thereby making said installation efficient and economical.

**(FR):** La présente invention renforce, à l'aide d'une structure de renforcement de force de support horizontale, une insuffisance d'une force de support horizontale d'un pilier de glissière de sécurité provoquée par une formation généralement plus étroite d'une "largeur d'installation de glissière de sécurité au niveau d'une section d'inclinaison d'une pente" qu'une tolérance prescrite, et permet en même temps à une charge d'impact d'être absorbée par la structure de renforcement de force de support horizontale et permet à une absorption due à une déformation de flexion de précéder l'absorption due à une réaction, ce qui permet d'éviter un danger de mort dû à une force de réaction à l'impact initial et de réduire considérablement l'importance de la force de réaction due à la réaction, ce qui constitue une cause principale d'accidents primaires et secondaires ultérieurs. La présente invention possède en outre une structure de renforcement de force de support horizontale simple, qui facilite la réparation et la nouvelle installation d'une glissière de sécurité, ce qui rend ladite installation efficace et économique.

**(KO):** 본 발명은 '성토구간 비탈면의 가드레일 설치 폭'이 규정된 허용치보다 통상 좁게 형성됨으로 인해 발생된 가드레일 지주의 수평지지력의 부족분을 수평지지력보강구조에 의해 보강되게 함과 동시에, 이와 함께 충격하중을 수평지지력보강구조에 의해 흡수되게 하되 굴곡변형에 의한 흡수가 반작용에 의한 흡수보다 선행되게 하여 초기 충격반작용력으로 인한 생명의 위협을 방지하면서 후속되는 1, 2차 사고의 주범인 반작용에 의한 반작용력의 크기를 크게 감소시킨 것일 뿐 아니라 수평지지력보강구조가 간단하여 이에 의한 가드레일의 보강보수 및 신설이 용이하여 그 설치가 효율적이고 경제적인 발명이다.

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