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**«НАЦИОНАЛЬНЫЙ ИССЛЕДОВАТЕЛЬСКИЙ
ТОМСКИЙ ПОЛИТЕХНИЧЕСКИЙ УНИВЕРСИТЕТ»**

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Научный доклад об основных результатах подготовленной научно-квалификационной работы

Тема научного доклада
ТЕРМОЭЛЕКТРИЧЕСКИЙ КОНТРОЛЬ МЕТАЛЛОВ ГЕОДЕЗИЧЕСКИХ СКВАЖИН

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Актуальность работы

Для надежного измерения термоэдс при управлении металлами и сплавами требуется внедрение специальной измерительной техники. Предлагаемый метод в этой работе пытается удовлетворить эти требования, которые еще не встречаются в коммерчески доступном оборудовании, и поэтому результаты содержат менее систематические ошибки. Описаны решения, позволяющие получать более надежные данные по термоэлектродвижущей силе с учетом дополнительных параметров контакта, таких как поверхностная неоднородность после термообработки или шероховатости поверхности после пластической деформации, действительно помогут улучшить качество тестового анализа.

Цель:

В представленной работе является термоэлектрические свойства металлических поверхностей при пластической деформации. Исследовать термоэлектрические свойства пластически деформированных структурных углеродистых сталей и хромоникелевых сталей для создания компактного и более чувствительного аппаратно-программного комплекса для неразрушающего экспресс-тестирования металлов.

Задачи:

1. Провести исследование электрических свойств термоэлектрических источников.
2. Разработать методику мониторинга переходного сопротивления контактов электродов с образцами.
3. Разработать модель устройства и провести его испытания.

Положение выносимые на защиту:

1. Модель, описывающая зависимость термоэдс от точек контакта при испытании металлов.
2. Сопротивление нагрузки влияет на электрические характеристики эквивалентного термоэлектрического источника термоэдс.

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