

対象国橋梁・路面補修分野における開発ニーズ(課題)

- ・維持管理予算不足に起因する安価な工法による橋梁・路面早期劣化
- ・鋼製伸縮装置の日常管理コスト高・段差・振動・漏水
- ・現地埋設型伸縮装置の耐久性不足・適用範囲の狭さ
- ・路面損傷に応じた有効で高耐久の路面補修技術が確立されていない為、路面健全性が保てない

提案製品・技術

- ①ファルコン・シームレスジョイント工法:特殊弾性加熱合材ファルコンを使用し耐久性・走行安全性・沿道環境性・水密性に優れる。表層補修可能で交換費用が安価、LCC低減効果
- ②ファルコンによる高耐久な路面補修技術
- ③上記工法の最適化技術(現場調査・施工指導)

調査概要

- ・調査期間:2024年5月1日～2025年8月31日
- ・対象国・地域:ベトナム国ハノイ市、ビン市、ダナン市、ホーチミン市、及び各市周辺
- ・調査概要:特殊弾性加熱合材ファルコンを使用した、①橋梁用埋設型伸縮装置ファルコン・シームレスジョイント②路面補修技術 ③工法最適化技術 を活用して、現地の橋梁・路面早期劣化、維持管理予算不足、路面健全性の向上等の課題解決しビジネス化可能かどうかを実証する調査。本支援事業後に提案技術のビジネス展開を図り、日本の技術で現地の橋梁長寿命化、道路・橋梁維持管理課題の解決を目指す。



ビジネスモデル

前提:合材ファルコンの販売、施工機器の販売・リース並びに施工技術指導による収益モデルを想定する。

具体的には、

- ①ベトナム規格取得
- ②補修計画への採用
- ③施工を担う現地認定施行会社の組織の流れで現地でのビジネス展開を目指す。

対象国に対し見込まれる成果(開発インパクト)

- ・橋梁・路面早期劣化、維持管理予算不足の課題に対し、日常管理コスト低減、LCC低減、路面環境の長期的安定、車両の走行安全性の向上をもたらす。
- ・質の高い、持続可能かつレジリエントな道路・橋梁は、交通・物流面で経済発展を支援し生活向上に貢献する。
- ・走行安全と快適性、振動騒音の少ない住環境に貢献することで、ひいては人々に安全で快適な日常をもたらす。

Development issues in the country/Bridge and Road surface repair sector

- Early deterioration of bridges and road surfaces caused by cheap construction methods due to lack of budget.
- High maintenance cost, road surface gap, vibration, and water leakage of metal expansion joints.
- Low durability & narrow application range of local asphalt plug joints.
- Road surface integrity cannot be maintained because highly durable road surface repair technology has not been established.

Survey Outline

- Survey period : May,1,2024~Aug,31,2025
- Country/Area : Hanoi, Vinh, Da Nang, Ho Chi Minh City, and nearby in Vietnam
- Survey Overview : A business validation survey to confirm that using 1) Falcon-Seamless joint method, 2) road surface repair technology, and 3) construction method optimization technology is able to solve problems such as early deterioration of bridges and road surfaces and lack of maintenance budget, as well as improve road surface integrity.
- After this survey, we will aim to develop the proposed technology into business and use Japanese technology to extend the lifespan of local bridges and solve road and bridge maintenance management issues.

Products/Technologies of the Company

- 1) Falcon-Seamless joint method : Uses special elastic heating mixture Falcon. Excellent durability, driving safety, good roadside environment and watertightness. Low replacement costs. LCC reduction effect.
- 2) Highly durable road repair technology using Falcon
- 3) Optimization technology for the above construction method (site survey/construction guidance)



Falcon-Seamless Joint



Business Model

Premise: We assume a profit model based on sales of mixture Falcon, sales and leasing of construction equipment, and construction technical guidance. In particular, we aim to expand our business locally through the following steps:

- 1) Product certification to Vietnamese standard
- 2) Aim for the adoption of the technology in repair plans
- 3) Organize locally certified constructors that are responsible for the construction process.

Expected Social Impact in the Country

- For the issues of early deterioration of roads&bridges and lack of budget, it will reduce daily management costs and LCC, stabilize the road surface environment for long term, and improve driving safety.
- High-quality, sustainable, and resilient roads&bridges support economic development and improve people's lives in terms of transportation and logistics.
- By contributing to driving safety and comfort, and a living environment with less vibration and noise, it ultimately brings people a safe and comfortable daily life.