Fluid Lifecycle Management

Workstream description

The purpose of this workstream is to provide guidance to the data center community regarding paths to circularity for spent liquid cooling dielectric fluids. Both single-phase and two-phase fluids are in scope. It is critical that the OCP community educates data center personnel about fluid disposition options at end of service and the potential carbon cost of each option.

This workstream is supported by the Immersion Challenges workstream and will involve expertise from the Cooling Environments sub-projects and workstreams in order to incorporate the broadest possible views from the OCP community. It is essential that single-phase and two-phase fluid manufacturers participate; however, participation by the end-user is equally important to ensure any guidance generated by this workstream will be understood by data center operators. The outcome of this workstream will be a white paper describing options available regarding disposition of fluid at end of service, e.g., disposal, reuse or recycle the fluid.

Workstream scope

The primary scope of this workgroup is to offer recommended options to the data center to remove the out of service fluid from its facility.

The secondary scope of this workgroup is to identify best practices currently available to determine fluid life cycle assessment (LCA).

Type of work

- Surveys, interviews and engagements within OCP communities and the broader industry
- Whitepaper authoring
- Creation of educational materials
- Online research of emerging or additional technologies

Deliverables

- Primary deliverable: whitepaper content focused on fluid disposition options available to data centers
- Secondary deliverable: whitepaper describing best practices regarding LCA determination
- Educational materials

Expertise required

- Educational/university expertise
- Experienced single-phase and two-phase immersion cooling fluid manufacturers
- Experienced immersion cooling end-users
- Sustainability and/or circularity expertise
- Experience determining and / or delivering fluid LCA, preferably using ISO 14044:2006 or other appropriate guidelines
- Experienced immersion cooled facility operators

Relevant links

None at this point