


## Case studies of Advanced Construction and Demolition waste(CDW) Recycling initiatives and technologies In JAPAN

Affiliation	Affairs Council of Recycled-Aggregate Concrete(ACRAC)	
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Position:	ACRAC Executive Director	
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Title	<b>ACRAC Quality audit system (Quality audit system on recycled aggregate for concrete)</b>	
Theme classification	<input type="checkbox"/>	Prevention
	<input type="checkbox"/>	Re-use
	<input type="radio"/>	Recycle
	<input type="checkbox"/>	Reduce Co2
	<input type="checkbox"/>	Legacy
	<input type="checkbox"/>	Business to overseas
	<input type="checkbox"/>	Etc.
Technology development stage	<input type="radio"/>	Practical use
	<input type="checkbox"/>	Scheduled to be put into practical use by 2020
	<input type="checkbox"/>	Scheduled to be put into practical use after 2020
Specific content	<p>This audit system for ACRAC members is a system to objectively audit the quality of recycled aggregate for concrete from 2013.</p> <p>The "Recycled Aggregate Concrete Committee" to conduct the final judgment consists of six members, chaired by academics and experts (civil engineering and construction), administrative officials, research institutions, users, related people and five members of the ACRAC Quality Audit Committee.</p> <p>At ACRAC, due to the audit by the Audit Committee and the approval of the Recycled Aggregate Concrete Committee, we have issued an approval letter for the use of the appropriate mark to manufacturing plants that conform to the quality audit system.</p> <p>At ACRAC, nine manufacturing plants nationwide are currently certified as conforming factories.</p> <div style="text-align: center;">  <p><b>ACRAC</b> appropriate mark</p> </div>	
Appeal point	As the quality audit system on recycled aggregate for concrete using concrete waste as the raw material, it is the first in Japan.	

# Affairs Council of Recycled-Aggregate Concrete (ACRAC)

## Quality audit system

(Quality audit system on recycled aggregate for concrete)

### 1. Outline of the quality audit system

- Targets are ACRAC member companies.
- The auditors designated by the “Quality Audit Committee” comprising representatives of ACRAC member companies.

(The chairman selects the auditors from the concrete engineers, chief engineers, and those with equivalent or higher qualification.)

→ Audit to be executed by a pair of two auditors

- Quality audit is to be executed according to the ACRAC Quality Audit Standard.



The audit results are summarized in the “Quality Audit Report” and determined to be acceptable if justified by discussions in the “Quality Audit Committee” that comprises the people of experience or academic understanding, persons concerned with administration, persons concerned with users, and the chairman and members selected by the ACRAC working group.

## 2. Quality Audit Standard

The quality audit standard is classified into “General Requirements,” “Particular Requirements,” “Field Inspection (Product Sampling Inspection).”

Classification	Items	Contents
A. General requirements		(1) Quality assurance
		(2) Compliance of eco-friendly goods and services procurement
		(3) Reduction of environmental impact
		(4) Securing of technical capacity
		(5) Training
		(6) Handling of non-compliance
		(7) Environmental protection
B. Particular requirements	1.Product management standard	(1) Clarification of product quality
	2. Manufacturing management standard	(1) Original concrete (2) Manufacturing method (3) Manufacturing process quality
	3. Equipment management standard	(1) Manufacturing equipment management (2) Inspection equipment management
	4. Outsourcing management standard	(1) Outsourcing management
C. Field inspection	Product inspection	(1) Density (2) Percentage of absorption (3) Content of materials finer than 75μm sieve