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Comparison of the Properties of ex-DC and -AUC UO₂ pellet

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ABSTRACT

Properties of the DC and AUC pellets which were supplied to the commercial reactors in Korea had been evaluated. Ex-DC UO₂ powder showed lower specific surface area than ex-AUC UO₂ powder due to its morphology. Since surface area of ex-AUC UO₂ powder was large, it had more chance to oxidation. This led to raise O/U ratio. Apparent density of granulated ex-DC UO₂ powder was similar to ex-AUC UO₂ powder. There was no great difference in sintered density between DC and AUC pellet though DC pellet contained more U₃O₈ and was sintered at lower temperature than AUC pellet. DC and AUC pellets showed similar grain size and their average size was about 7.5μm. DC pellet absorbed less hydrogen than AUC pellet.